RESULT

OF

ASTRONOMICAL OBSERVATIONS

MADE AT

THE HONORABLE,

THE EAST INDIA COMPANY'S OBSERVATORY

AT MADRAS.

BY

THOMAS GLANVILLE TAYLOR, Esq.

ASTRONOMER TO THE HONORABLE COMPANY.

Vol. IV.

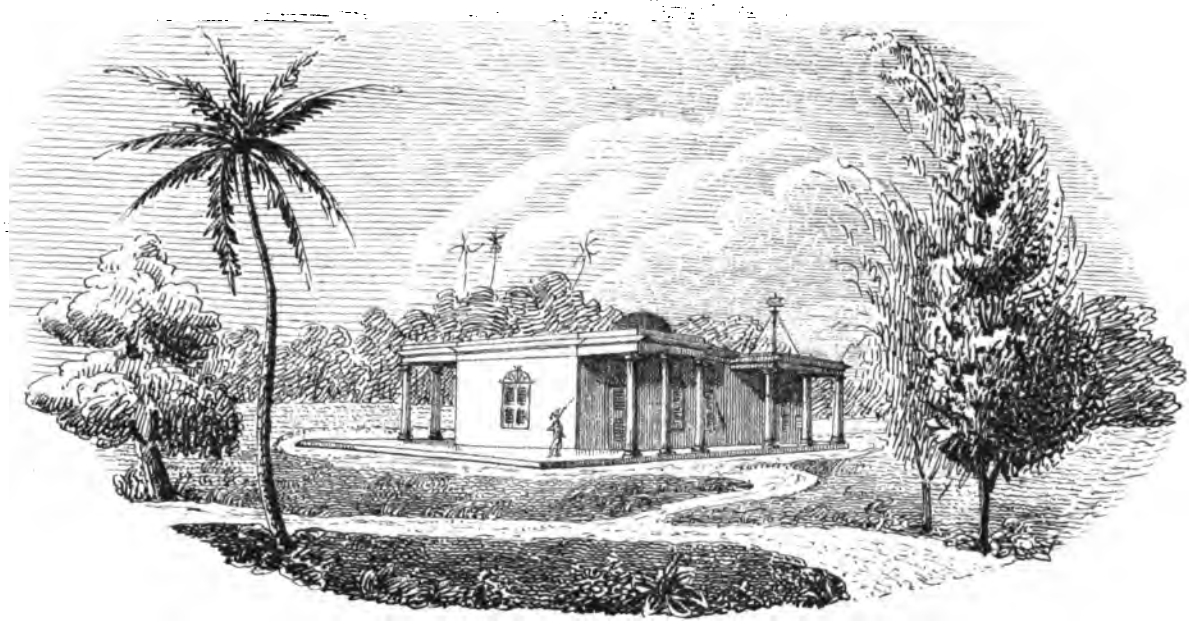
For the Years 1836 and 1837.

SECOND EDITION.

PRINTED

BY ORDER OF THE

MADRAS GOVERNMENT.



MADRAS:

PRINTED BY R. W. THORPE,

AT THE VEPERY MISSION PRESS OF THE SOCIETY FOR PROMOTING CHRISTIAN KNOWLEDGE.

MDCCCXXXIX.

Digitized by Google

Sci525.50

Digitized by Google

PREFACE.

THE contents of the present volume differs so little from that found in the former volumes of the Madras Observations, as almost to render a preface unnecessary: to conform however to established customs, it is proper for me to remark, that the Observations on the meridian of which the results are here given, have been continued without interruption—principally by the native assistants, and that those *out* of the meridian have been made exclusively by myself: In allowing the meridianal Observations to be made by the native assistants, I have been careful frequently to re-examine their bisections with the Mural Circle, and to compare the clock errors from their observations with the Transit Instrument with those determined from my own, when, in no case have I found that their bisections were less accurate than I could have made myself, and the difference between our estimations of time (" *personal equation*") has seldom amounted to two tenths of a second. The observations of the Sun (which have always proved unsatisfactory—still continue to exhibit the same want of consistency, and my endeavour to discover the cause have—I regret to state not in the least degree proved successful: the observations of the Planet *Mars* and of Stars situated near to his path for the purposes of Parallax, have now been continued for three successive oppositions, and the necessary comparisons between these and corresponding observations which have been made at the Cape of Good Hope Observatory, have been instituted—without I fear having in the least advanced the object of enquiry: this result, as well as other observations of measuring angular distances with the Mural Circle, tends to shew—that although a single observation may be *depended upon* to 1″, 5 or 2″; still, the tenth or twentieth part of this amount—which is the present object of enquiry,—can only be attained by an almost unlimited number of observations. The observation of Moon Culminating Stars and occultations has been continued, as has likewise the Eclipses of Jupiter's Satellites, but not having received the corresponding observations at Greenwich complete, I have delayed for the present to attempt any improvement of the supposed value of the Longitude, and since it would have interfered with the observation of the Star Catalogue to attempt reflection Observations, I have likewise allowed the question of Latitude to remain undisturbed. The reductions have for the most part been performed by myself, and when performed by an Assistant, have invariably undergone—either a recomputation, or a careful revision by myself before they were trusted. On comparing the places of the 2066 Stars which are here given, with Piazzi's

Digitized by Google

Catalogue; a result similar to that noticed in Vol. III. (as occurring between the Catalogue *there* given when compared with Piazzi) was here too apparent; in consequence of which, I have gone back to the catalogue given in Vol. II. and have likewise compared it with the places assigned by Piazzi; after combining the results from these three catalogues (containing about 7600 Stars) there still appears a tendency to exhibit a *General Proper Motion* of the fixed Stars, which can be explained, by supposing a motion of the Solar System towards the North Pole of the Ecliptic: whether the data from which this conclusion has been drawn shall appear sufficient or no, I would beg for the present to claim a little indulgence—until a comparison of the table of refractions employed by Piazzi (not now at my command) with those at present in use, shall have been instituted—and a re-examination of Latitudes undertaken;—this done,—I shall be prepared either to announce this important and somewhat unexpected result, with more precision and certainty, or to acknowledge with humility that I have been in error—

T. G. TAYLOR,
H. C. Astronomer.

I take this opportunity to acknowledge with very many thanks, the receipt of copies of the *Connoissance des Temps* and *Nautical Almanac*, as well as other very valuable works from learned Societies and individuals.

Note to the Second Edition. The present edition of this volume has been rendered necessary, in consequecne of nearly the whole of the copies of the former edition having been lost in the wreck of the Duke of Northumberland: In the examination of the proof sheets, reference has been had to one of the printed copies of the first edition, from which, with the exception of one or two notes which have been rendered necessary on the present occasion, it differs in no respect whatever.

T. G. TAYLOR,
H. C. Astronomer.

Digitized by Google

OF THE TRANSIT INSTRUMENT.

THE focal length of the Transit Instrument is 61 Inches, with a clear aperture of 3¾ Inches; but for bright Stars and the Sun an aperture of 2 Inches only has generally been employed. As originally constructed by Dollond the pivots were of bell metal, but during the first three years of its use, these had worn so unequally, as to render it necessary to re-turn them, when collars of steel were applied over the bell metal, so as to restore them to their original dimensions; this was accomplished in the years 1834—35 by Mr Barrow, the Honorable Company's Instrument maker at Calcutta, in a manner which rendered the Instrument as perfect as when it was first erected. Consulting Vol. III. it appears that in January and February 1834
the illuminating pivot was *apparently* less than the other pivot 1″,69
and in December 1835 that it was less...................... 1 ,10

Since this time,—from several inversions of the axis—on the 5th October 1836
the illuminating pivot was *apparently* less than the other pivot. .2″,06
and on the 21st November 1837.. .... 1 ,81
Mean=1 ,66

The eye piece is furnished with five vertical and one horizontal fixed wires, and one vertical moveable wire; the Equatorial intervals between the former were determined from the intervals occupied by several stars situated near the Pole to pass from wire to wire, as follows:—

	Seconds.
from 1st wire to centre...........	+54,577
2d.......................	+26,961
4th.......................	—27,470
5th.......................	—55,289

rendering necessary the correction........ $\frac{-0,244}{\text{cos. Decln.}}$ to reduce the mean of the five wires to the centre wire.

Digitized by Google

These numbers hold good up to the 30th October 1836, when the wires were broken—in consequence of the shutters on the roof of the Observatory being blown open by the violence of the wind, whereby the instrument was exposed for some minutes to very heavy rain;*—having failed during this time to secure the shutter (the fastenings having given way, and one only out of three hinges remaining entire) I was compelled to take the transit off its axis, and deposit it in the safest place I could find; the wind which was blowing from the North, had burst open the Northern door, as well as the Southern one immediately opposite; hence there appeared to be no other choice—than that of placing it upon the table which stood against the most secure part of the Northern wall of the Observatory;—here, supported by books and a green baize cover, I felt assured that nothing short of the building falling in, would have in the least degree endangered it; at one instant I thought of depositing it upon the floor, where it would be sheltered by the table, but streams of water which were flowing through the Observatory determined it otherwise; —at 5 o'clock in the afternoon having completed all that could be of service to secure the Instruments—I left the Observatory to the care of an assistant. At ¼ before 7 it blew a perfect hurricane,—the Dome on the top of the Observatory was blown away, and the stoutest trees and hedges were laid low!—at 7 o'clock the wind had much moderated, and at ½ past 7—a lull—a dead calm ensued. I watched the appearance of the sky and fluctuations of the Barometer at this moment with feelings of intense anxiety and interest;—the clouds were passing one another in utter confusion, and although calm below, it was evident that at no great height above the Earth there was a severe conflict among the elements;—I had hardly time to make a note of these appearances and of the height of the Barometer, when the rain—which had ceased during the lull, again set in, accompanied by the sighs and moans of the again returning hurricane:—at a ¼ before 8, the wind—*which now blew from the* SOUTH, had risen to a pitch more fearful than that before experienced; in short—no description can convey an adequate idea of its intense fury;—doors and windows, iron bars and bolts—were with one rude rush scattered and broken! At this moment the southern doors of the Observatory, situated opposite to the northern wall where the Transit Instrument had been deposited—was literally blown to pieces; whereby one of the pieces (about 8 feet by 6 Inches by 2 Inches) which had been blown across the room, had fallen edgewise upon the head of the micrometer attached to the Transit Instrument, and very neatly cut it off, without at all disturbing the other parts of the telescope. Other

* There fell 7,5 Inches, in the course of 12 hours—for the indications of the Barometer see the end.

Digitized by Google

injuries had been sustained—by the books having been disturbed, whereby the object end of the telescope had fallen upon a pile of books from a height of about 2 feet, whence two slight indentations had been sustained, one on each side of the tube, at 10 or 12 Inches above the object end of the telescope; and the tangent screw of the setting circle had been hit: but it was evident that the axis had not in the slightest degree been injured; a circumstance of which I have since well assured myself from observation.—The first fact that struck my notice on examining the Instrument—was, that the focal length of the object glass had apparently altered; or rather that the telescope had become shorter; for, in order to render the principal focus coincident with the wires, it was necessary to remove the object glass ,07 of an inch from the position it had hitherto occupied in the cell into which it was secured;—this remedied (which I was enabled to do by interposing three pieces of brass of this thickness between the bottom of the cell and the frame carrying the object glass) it only remained that the micrometer screw should be replaced; this was readily and very neatly accomplished by Mr. Barrow of Calcutta, and six weeks after the date of this calamity, all was again in order:—in this interval the observations were continued without the micrometer (as will be seen in the sequel,) without I apprehend in any material degree endangering their general accuracy.

Up to the date of these misfortunes the illuminating pivot had always reposed upon the eastern Y or Pillar; but the damage sustained by the tangent screw above noticed, rendering its motion stiff and uncertain, I was induced to shift the position of the axis—so as to bring the other setting circle into use; accordingly from the 5th November to the present time the position of the Instrument has been "*illuminating Pivot West.*"

On the 5th of November I put in a new set of Wires, when—from the mean of several Stars situated near to the Pole, the Equatorial intervals were found to be—

	Seconds.
from 1st wire to centre	+54,840
2d	+27,251
4th	—27,828
5th	—54,530

hence to reduce the mean of the five wires to the centre wire, for the fixed Stars we must apply the correction .... $-\frac{0^{s},053}{\sin. N. P. D.}$

In volumes I. and II. the value of the micrometer screw had been determined to be 34",366 for each revolution, whereas for that now in use (which I requested Mr. Barrow to make of nearly the same degree of fineness)—one revolution corresponds to 32",94.

It now only remains for me to state another, though trifling circumstance with regard to the Transit Instrument—namely, that after above six years of constant use, the lacquer had completely disappeared from the eye end of the telescope, and existed in patches only on the other parts ;—with a view to arrest the progress of oxidation, as well as to improve its now dingy appearance,—on the 22-25th February 1837, I applied two coats of oil paint over the entire surface, whereby its appearance as well as efficiency remains unimpaired.

ERROR OF LEVEL OF THE TRANSIT AXIS.

The error of level of the Transit Axis has been determined as heretofore by the Spirit level, and the necessary correction for error of level applied to each observation ; this is true at least for the observations made before the 30th October 1836, and for those made after the 18th January 1837 :—for the observations made between these dates—having from time to time adjusted the axis to horizontality, no correction on this account is necessary. The Column (L + P) is obtained from the mean of three readings of the level with the cross level East, and the same number with cross level West, viz. one at each extremity, and one in the middle of the pivots ; the value of P or half of the apparent defect of the illuminating pivot which is given at page 1—being applied, leaves the values of L which have been employed in the reduction of the Observations. It must be noticed however that the correction P applies with a contrary effect after the 5th November 1836 to what it did before that date, in consequence of the illuminating or smaller pivot having been transferred from the Eastern to the Western Pier, as has already been stated at page 3.

Digitized by Google

1836.		Illmtg. Pivot.	L+P	REMARKS, &c.
			"	
Jany.	2	East	3,56 E	
	4	..	3,49 „	
	6	..	2,92 „	
	8	..	2,72 „	
	11	..	3,03 „	
	13	..	3,54 „	
	16	..	3,48 „	
	18	..	3,10 „	
	20	..	3,11 „	
	22	..	3,13 „	
	25	..	3,03 „	
	27	..	3,28 „	
	29	..	3,17 „	Mean= { 3,20E ; ,70 } ∴ L=3,90E
Feb.	1	..	2,60 „	
	3	..	2,66 „	
	5	..	2,84 „	
	8	..	3,06 „	
	10	..	2,92 „	
	12	..	2,50 „	
	14	..	2,39 „	
	16	..	2,21 „	Mean= { 2,65E ; ,70 } ∴ L=3,35E
	18	..	1,99 „	
	20	..	1,60 „	
	21	..	1,60 „	
	22	..	1,96 „	
	24	..	2,15 „	
	26	..	2,66 „	
	28	..	2,29 „	
March	1	..	2,19 „	
	3	..	2,61 „	
	5	..	2,60 „	
	7	..	2,15 „	
	9	..	1,72 „	
	12	..	1,63 „	
	14	..	1,32 „	
	16	..	1,38 „	
	18	..	1,74 „	
	21	..	1,22 „	Mean= { 1,93E ; ,70 } ∴ L=2,63E
	23	..	0,88 „	
	25	..	0,88 „	
	28	..	0,72 „	
	30	..	1,00 „	
April	2	..	1,10 „	
	4	..	0,87 „	
	7	..	0,05 W	
	9	..	2,01E*	
	10	..	0,17 W	
	11	..	0,39 E	
	13	..	0,31 „	

1836.		Illmtg. Pivot.	L+P	REMARKS, &c.
			"	
April	14	East	1,23 E	
	16	..	0,40 „	
	18	..	0,12 „	
	19	..	0,31 „	
	21	..	1,11 „	
	23	..	0,42 „	
	25	..	0,07 W	
	27	..	0,15 „	
	29	..	0,41 E	
May	1	..	0,60 „	
	3	..	0,38 „	
	5	..	0,15 „	
	7	..	0,25 „	
	9	..	0,50 W	Mean= { 0,44E ; ,70 } ∴ L=1,14E
	11	..	1,02 „	Land winds set in.
	13	..	1,70 „	
	16	..	0,55 „	
	18	..	2,02 „	
	20	..	1,25 „	
	23	..	1,47 „	
	25	..	1,32 „	
	27	..	1,53 „	
	29	..	1,67 „	
	31	..	1,12 „	
June	2	..	1,47 „	
	4	..	1,26 „	
	6	..	1,21 „	
	8	..	1,07 „	
	10	..	1,37 „	
	12	..	1,29 „	
	14	..	0,82 „	
	16	..	0,52 „	
	18	..	0,17 „	
	20	..	0,43 „	
	22	..	0,93 „	
	29	..	0,85 „	
July	1	..	1,05 „	Mean= { 1,13W ; ,70 } ∴ L=0,43W
	4	..	0,15 E	Heavy rain on the 2nd.
	8	..	0,46 W	
	10	..	0,11 „	
	13	..	0,62 „	
	15	..	0,66 „	
	18	..	0,73 „	
	20	..	0,19 „	
	23	..	0,43 „	
	27	..	0,10 „	
	29	..	0,26 E	
August	1	..	0,14 W	
	11	..	0,54 E	

* This is omitted in taking the Mean.

Digitized by Google

1836.	Illmtg. Pivot.	L+P	Remarks, &c.
		″	
August 15	East	0,64 E	
18	..	1,06 „	Mean= { ″0,05W / ,70 } ∴ L=″0,65E
22	..	1,53 „	
24	..	1,20 „	
27	..	1,57 „	
Sept. 7	..	2,21 „	
9	..	1,83 „	
11	..	1,78 „	
15	..	1,87 „	
17	..	2,01 „	
19	..	2,15 „	
22	..	1,93 „	
23	..	1,65 „	
26	..	2,52 „	
29	..	2,59 „	
Oct. 3	..	2,12 „	
6	..	2,23 „	
8	..	2,92 „	
10	..	2,23 „	
12	..	1,69 „	
14	..	1,44 „	
16	..	1,17 „	
19	..	1,81 „	
21	..	1,97 „	
24	..	2,03 „	
26	..	1,92 „	Mean= { ″1,93E / ,70 } ∴ L=″2,63E
29	..	3,73 „	
1836.		L—P	
Nov. 5	West	0,00	Adjusted for Level.
9	..	2,50 E	Do. Do.
12	..	2,00 „	Do. Do.
18	..		Very heavy rain and high wind—
19	..		there fell 17 inches in 36 hours.
22	..	7,50 E	Adjusted for Level.
Decr. 1	..	1,37W	Do. Do.
6	..	1,90W	Do. Do.
9	..	0,00 „	
13	..	1,70W	Do. Do.
21	..	0,10 E	
24	..	0,22 „	
1837.			
Jany. 2	..	0,80W	
9	..	2,00 „	Adjusted for Level.
18	..	2,67 E	
25	..	2,55 „	
31	..	2,15 „	

1837.	Illmtg. Pivot.	L—P	Remarks, &c.
		″	
Feb 4	West	2,50 E	Mean= { ″2,47E / ,70 } ∴ L=″1,77E
7	..	2,47 „	
10	..	4,20 „	
14	..	4,37 „	
16	..	4,02 „	
21	..	3,20 „	
27	..	4,11 „	
March 4	..	4,76 „	
9	..	3,91 „	
13	..	3,21 „	
17	..	3,35 „	
21	..	2,70 „	
24	..	2,79 „	
28	..	3,16 „	Mean= { ″3,65E / ,70 } ∴ L=″2,95E
31	..	1,91 „	
April 3	..	1,70 „	
6	..	1,62 „	
9	..	1,17 „	
12	..	1,95 „	
15	..	1,90 „	
18	..	1,36 „	
21	..	2,41 „	
24	..	1,04 „	
27	..	0,88 „	
30	..	1,38 „	Mean= { ″1,57E / ,70 } ∴ L=″0,87E
May 3	..	0,78 „	
6	..	0,75 „	
9	..	0,66 „	
12	..	0,27 „	
15	..	0,25W	
18	..	0,07 E	
21	..	0,74 „	
24	..	1,00 „	
27	..	0,16 „	Mean= { ″0,56E / ,70 } ∴ L=″0,14W
30	..	1,84 „	Hot Land Winds.
June 2	..	2,69 „	
5	..	0,93 „	
8	..	0,78 „	
11	..	0,55 „	
14	..	0,07 „	
17	..	1,12 „	
20	..	0,58 „	
23	..	1,28 „	
26	..	1,23 „	
29	..	0,97 „	
July 2	..	0,72 „	

Digitized by Google

1837.	Illmtg. Pivot.	L—P.	REMARKS &c.
		″	
July 5	West	1,10 E	
8	..	0,74 „	
11	..	0,95 „	
14	..	1,21 „	
17	..	0,88 „	$\text{Mean}=\left\{\begin{matrix}0'',88\text{E}\\ ,70\end{matrix}\right\}\therefore L=0'',18\text{E}$
20	..	1,47	
23	..	1,48 „	
26	..	1,42 „	
29	..	1,03 „	
August 1	..	0,84 „	
4	..	1,82 „	
7	..	2,41 „	
10	..	1,64 „	
13	..	1,73 „	
16	..	1,83 „	
19	..	1,90 „	
21	..	1,38 „	
25	..	1,50 „	
28	..	1,86 „	
31	..	1,82 „	
Sept. 3	..	1,05 „	
6	..	1,75 „	
9	..	1,45 „	
13	..	1,40 „	
15	..	1,39 „	
18	..	1,26 „	
21	..	0,91 „	
24	..	0,84 „	
27	..	1,60 „	
30	..	0,50 „	$\text{Mean}=\left\{\begin{matrix}1'',45\text{E}\\ ,70\end{matrix}\right\}\therefore L=0'',75\text{E}$
Oct. 3	..	2,17 „	

1837.	Illmtg. Pivot.	L—P.	REMARKS &c.
		″	
Oct. 6	West	2,26 E	
9	..	2,13 „	
12	..	1,90 „	
15	..	1,87 „	
18	..	2,27 „	
21	..	2,60 „	
24	..	2,50 „	
27	..	2,38 „	
30	..	2,60 „	$\text{Mean}=\left\{\begin{matrix}2'',27\text{E}\\ ,70\end{matrix}\right\}\therefore L=1'',57\text{ E}$
Nov. 2	..	6,78 „	There fell 8,6 inches of rain.
5	..	6,82 „	
8	..	6,74 „	
11	..	5,90 „	
14	..	5,66 „	
17	..	5,10 „	
20	..	4,78 „	
23	..	5,18 „	
26	..	5,29 „	
29	..	5,00 „	
Decr. 2	..	5,09 „	
5	..	4,99 „	
8	..	5,33 „	
11	..	5,70 „	$\text{Mean}=\left\{\begin{matrix}5'',27\text{E}\\ ,70\end{matrix}\right\}\therefore L=4'',57\text{E}$
14	..	3,58 „	Fine Weather.
17	..	2,85 „	
20	..	2,25 „	
23	..	2,50 „	
26	..	2,40 „	
29	..	1,99 „	
31	..	2,05 „	

ERROR OF COLLIMATION OF THE TRANSIT INSTRUMENT.

Having found from experience that the determination of the error of Collimation by inversion of the axis was sometimes liable to uncertainty, (by reason of the great care which is necessary, but which cannot always be afforded, in placing the pivots on their Y's), I have in the present volume, as heretofore, had recourse to inversion for this purpose but very seldom, and then only have employed it as a check upon other methods. In the early part of 1836 the error of Collimation was determined by measuring with the micrometer

Digitized by Google

screw, the horizontal angular distance between the North and South Meridian Marks, and comparing this result with the previously known true angular distance; thus,—if C represent the collimation error, N^1,—S^1 the observed azimuths of the centre wire as affected by C, and N,—S the azimuths as not so affected, we have

$$\text{the reading of the North Mark} = +N^1 = +N \pm C$$
$$\text{South do.} = -S^1 = -S \pm C$$

taking the sum, $N^1 - S^1 = N - S \pm 2C$; in which N—S, the true angular distance between the marks being known, we immediately obtain the value of C:—for the value of N—S ($=\theta$) there were several measures made in the early part of 1835 (see Vol. III p. 8.) in which it came out 180° 0′ 26″,03 and from 5 Inversions on the 13th January 1836 it came out 180° 0′ 25″,77; the former result bowever is that which has been employed in the computations. For the observations after 20th March and up to 30th October 1836, the azimuth of the centre wire from the North Mark only has been observed, and in place of the other, an observation has been made on every second or third day with the "*Reflecting Collimator.*" The observation with the "*Reflecting Collimator*" which has been explained already in Vol. III;—consists in measuring the angular distance (with the micrometer) between the direct image of the centre wire, and its image as reflected from a basin of quicksilver; to accomplish this, I drilled a small hole in the side of the telescope, at obout 6 inches from the eye end, so that the light from a lamp, after passing through it—might fall uninterruptedly upon the wires;—I now introduced a silver speculum into one of the eye pieces, in front of the lens, so that by varying its inclination, the light from the lamp could be thrown perpendicularly upon the wires, whereby their image as reflected from a basin of quicksilver placed underneath the Transit, was nearly as well defined as the direct image; the speculum was suspended upon an axis passing through the sides of the eye piece, by which it could be adjusted to the proper angle, and was furnished with a small elliptical hole (about ,07 of an In. diameter) through which the wires were seen. In the employment of this method, it is indispensably necessary that the centre wire should describe a vertical circle, and that the moveable wire be parallel to it; this latter precaution however would not be necessary—could the bisection be made at the exact point of its intersection with the horizontal wire; but this not being accomplishable in practise, in consequence of the want of light at this part of the field (by reason of the shadow of the aperture through which the observation is made)—it becomes necessary when paral-

Digitized by Google

lelism cannot be obtained, to allow for its effect:—In the case of the Madras Transit;—since the application of the steel pivots, the adjustment of the moveable wire for parallelism has proved insufficient; hence the readings of the Reflecting Collimator which now follow, are not those immediately read off from the instrument, but the readings as corrected for want of parallelism.

In the table which follows, these corrected readings of the Reflecting Collimator divided by 2, or C + L* are given;—in which C (as noted above) represents the error of collimation, and L the error of Level. The quantity L + P, is taken from the level observations at pages 5—7, save that for the days intermediate between those on which the level was observed, I have employed corresponding intermediate values. For the observations between the 1st November 1836 and 18th January 1837—having been deprived of the means of measuring angular distances, by the loss of the micrometer, I now placed a small Mark upon the pier which had hitherto supported the old North Meridian Mark, and as nearly as possible in the direction of the meridian; my object was, with the level—to render the amount L=0 by adjustment; and then, the reflecting collimator allowing me to adjust for any amount of Collimation C, the azimuth error would remain the only unknown: hence the observations made in the interval just stated do not require correction for error of Collimation. On the 18th January 1837 having applied the new micrometer, and for convenience sake produced a small collimation error—I recommenced the measurement of the errors of Collimation as they had previously been conducted before the Storm.

---

* In Vol. III. page 17 line 34 *et seq.*, I have committed an unaccountable mistake and an oversight;—1st in stating the reading of the Reflecting Collimator to be $(C+L+P)\times 2$,—and 2ndly, in omitting a correction due to the want of parallelism of the centre and moveable wires. As the numbers stand in Vol. III. they are however right, or very nearly so, in consequence of the correction for want of parallelism amounting to 7 or 8 tenths of a second—nearly that of P;—thus, the reading of the last column or 2 P, should be P + ″,75 ∴ P = —0″,77. And for lines 1—5 page 18 the following should be substituted—

Illuminating Pivot East, the reading was $+13'',81 = (C+L)\times 2$

West, $-5,43 = -\overline{C+L-2P}\times 2$

assuming P = —0″,80, we get L = 1″,29 E. and C = 5,″61; whereas from the level Observations we find L = 2″,11 E; and, from the Observation of the N. and S. Marks, C = 6,″15, and from inversion 6″,39.

Digitized by Google

1836.	Observed Azimuth N.	Observed Azimuth S.	(N+S+θ)/2 or C	REMARKS, &c.	Ref. Col. 2 or C+L	L+P	Diff. or C—P	P
	"	"	"		"	"	"	"
Jan. 1	+38,35	—44,24	+10,07					
2	38,15	44,41	9,89					
3	38,18	44,68	9,77		+14,65	+3,52	+11,13	—1,36
4	38,15	44,51	9,84		14,45	3,49	10,96	1,12
5	38,18	44,75	9,73					
6	38,08	44,61	9,75					
7	38,18	44,41	9,90		14,42	2,82	11,60	1,70
8	38,15	44,58	9,80					
9	38,25	44,58	9,85					
10	38,12	44,58	9,78	Mean=9",84	14,24	2,87	11,37	1,59
11	37,95	44,55	9,71					
12	38,18	44,45	9,88					
13	38,29	44,45	9,93		{14,61 14.82}	3,54	11,17	1,24
14	38,15	44,20	9,99					
15	38,05	44,03	10,02		14,49	3,51	10,98	0,96
16	38,18	44,06	10,07		14,16	3,48	10,68	0,61
17	38,22	44,10	10,07					
18	38,12	43,82	10,16					
19	38,05	43,82	10,13		13,65	3,11	10,54	0,41
20	37,95	44,17	9,90	Mean=9",99	12,69	3,11	9,58	+0,32
21	38,35	44,07	10,15		13,29	3,12	10,17	—0,02
22	38,22	44,10	10,07					
23	38,29	43,90	10,21					
24	38,39	44,31	10,06		12,36	3,03	9,33	+0,73
25	38,15	44,03	10,07					
26	38,25	44,07	10,10		12,53	3,15	9,38	+0,72
27	38,56	43,97	10,31		14,32	3,28	11,04	—0,73
28	38,32	44,21	10,07		13,13	3,22	9,91	+0,16
29	38,39	44,41	10,00					
30	38,29	44,41	9,95	Mean=10",10	12,70	2,88	9,82	+0,13
31	38,22	44,51	9,87		12,87	2,88	9,99	—0,12
Feb. 1	38,25	44,24	10,02		12,78	2,60	10,18	—0,16
2	38,15	44,27	9,96					
3	38,32	——	——		13,29	2,66	10,63	—0,56
4	38,36	44,00	10,19		13,47	2,75	10,72	—0,53
5	38,12	44,17	9,99		12,77	2,84	9,93	+0,06
6	38,36	44,24	10,07					
7	38,43	44,07	10,19		13,29	2,95	10,34	—0,15
8	38,33	44,14	10,11		13,47	3,06	10,41	—0,30
9	38,18	44,31	9,95					
10	38,33	44,17	10,09	Mean=10",05				
11	38,33	44,31	10,02					
12	38,56	44,37	10,11					
13	38,63	44,71	9,97		12,95	2,45	10,50	0,53
14	38,63	44,41	10,12		12,77	2,39	10,38	0,26
15	38,73	44,85	9,96					0,34
16	38,65	44,85	9,91		12,43	2,21	10,22	0,31
17	38,69	44,85	9,93		12,60	2,10	10,50	—0,57
18	38,56	44,88	9,86					
19	38,56	44,65	9,77	I took out the				
20	39,32	45,27	10,04	object glass	11,40	1,60	9,80	+0,24
21	39,76	45,19	10,30	Mean=9",90	12,43	1,60	10,83	—0,53

Digitized by Google

1836.	Observed Azimuth N.	Observed Azimuth S.	(N+S+θ)/2 or C	REMARKS, &c.	Ref. Col. 2 or C+L	L+P	Diff. or C—P	P
	″	″	″		″	″	″	″
Feb. 22	+39,59	— —	+ — —					
23	39,66	45,64	10,03		12,08	+2,05	10,03	0,00
24	38,98	45,34	9,84					—0,24
25	39,15	45,47	9,86		12,43	2,40	10,13	—0,27
26	39,01	45,37	9 84		.13,12	2,66	10,46	—0,62
27	38,91	45,55	9,69		13,29	2,47	10,82	1,13
28	38,84	45,45	9,72					
29	38,87	45,19	9,86					
Mar. 1	38,87	45,00	9,95		13,65	2,19	11,46	1,51
2	38,98	45,02	10 00	Mean=9″,91	12,95	2,40	10,55	0,55
3	38,87	45,27	9,82		12,43	2,60	9,83	0,01
4	38.94	45,12	9,93		13,12	2,60	10,52	0,59
5	38,87	—	—		13,02	2,60	10,42	
6	39,08	—	—		12,69	2,37	10,32	
7	38,87	—	—	•	12,26	2,15	10,11	
8	38,87	44,75	10,08					
9	39,01	—	—		11,23	1,72	9,51	
10	39,01	44,92	10,06		11,06	1,68	9,38	+0,68
11	38,81	—	—		11,06	1,68	9,38	
12	38,94	—	—		10,54	1,63	8,91	
13	38,91	—	—					
14	38,91	—	—		10,71	1,32	9,39	
15	38,77	45,05	9,88					
16	38,77	45,37	9,72		10,94	1,38	9,56	+0,16
17	38,52	—	—		10,71	1,56	9,15	
18	37,88	—	—		10,02	1,74	8,28	
19	38,08	—	—	Mean of 67	10,20	1,48	8,72	
20	38,59	—	—	= +9″,96	10,20	1,48	8,72	
21	38,49	45,02	9,75					

The extreme difficulty which has hitherto attended the keeping in view of the South Meridian Mark, by reason of the rapid growth of the trees which intervene between it and the Observatory, has at length determined me to give it up altogether; I do this with less reluctance than I otherwise should have done, from the consideration of its instability, and from the persuasion I feel—of the Reflecting Collimator being well qualified to supersede the use of two Marks. If we now take the mean of the values in the last column, we get P = —0″, 40, whereas from a similar number of observations in 1836, Vol. III. it came out—0″,70, and from observations at various times with the spirit level (page 1), we obtained for the value of P,—0″, 83 ; hence the assumption of P, to be—0″, 70—which has been done in the following computations, cannot be far from the truth.

Digitized by Google

1836.	L+P	Ref. Col. 2 or C+L	Diff. or C—P	REMARKS, &c.
	"	"	"	
March 23	+0,88	+10,02	+9,14	
25	0,88	10,02	9,14	
26	0,80	9,85	9,05	
28	0,72	9,85	9,13	
29	0,86	9,85	8,99	
April 1	1,05	9,51	8,46	
2	1,10	9,85	8,75	
4	0,87	10,02	9,15	
6	0,41	10,54	10,13	Mean of 10= +9,32"
7	—0,05	11,23	11,28	—0,70
			——	∴C= +8,62
9	+2,01	10,72	8,71	
11	0,39	9,16	8,77	
12	0,35	9,68	9,33	
14	1,23	10,89	9,66	
15	0,81	11,23	10,42	
16	0,40	9,94	9,54	
19	0,31	10,89	10,58	
20	0,71	10,02	9,31	
21	1,11	10,37	9,26	Mean of 10= +9,50"
22	0,76	10,20	9,44	—0,70
			——	∴C= +8,80
24	0,18	10,71	10,53	
25	—0,07	10,20	10,13	
26	0,11	9,51	9,62	
27	0,15	10,37	10,52	
28	+0,13	10,19	10,06	
May 1	0,60	10,20	9,60	
2	0,49	10,10	9,61	
3	0,38	10,10	9,72	
4	0,27	10,10	9,83	
6	0,20	10,44	10,24	
7	0,25	9,08	8,83	Mean of 12= +9,86"
9	—0,50	9,16	9,66	— ,70
			——	∴C= +9,16
11	1,02	12,95	13,97	Hot land winds set in.
13	1,70	12,26	13,96	
16	0,55	12,60	13,15	
20	1,25	10,56	11,81	
23	1,47	10,97	12,44	
25	1,32			Mean of 6= +13,21"
27	1,53	12,43	13,96	— 0,70
			——	∴C +12,51
31	1,12	11,23	12,35	
June 2	1,47	9,68	11,15	
5	1,23	10,89	12,12	
8	1,07	11,23	12,30	
11	1,33	12,07	13,40	
15	0,67	14,16	*14,83	

* This is omitted in taking the Mean.

Digitized by Google

1836.		L+P	Ref. Col. 2 or C+L	Diff. or C—P	REMARKS, &c.
		″	″	″	
June	17	—0,35	+ 12,60	+ 12,95	
	18	0,17	11,75	11,92	
	20	0,43	11,06	11,49	Mean of 10 = +12″,15 — 0,70 ∴ C = +11,45
	21	0,68	11,40	12,08	
	25	0,89	10,89	11,78	
				———	
	29	0,85	10,54	11,39	
July	1	1,05	11,23	12,28	
	4	+0,15	11,02	*10,87	
	7	—0,16	12,01	12,17	
	8	0,46	12,08	12,54	
	12	0,62	12,95	13,57	
	13	0,62	12,26	12,88	
	18	0,73	12,60	13,33	
	19	0,46	10,89	11,35	
	20	0,19	11,43	11,62	Mean of 10 = +12″,29 — 0,70 ∴ C = +11,59
	21	0,31	11,43	11,74	
				———	
	23	0,43	10,37	10,80	
	25	0,26	11,45	11,71	
	27	0,10	11,57	11,67	
	29	+0,26	10,71	10,45	Mean of 6 = +11″,10 — 0,70 ∴ C = +10,40
	31	0,06	10,46	10,40	
August	1	—0,14	11,40	11,54	
				———	
	11	+0,54	12,43	11,89	The observations with the reflecting collimator from the 11th to the 27th August were made by my assistant *Annutachary*, to whom I had confidently entrusted them during my absence from Madras;—having on the 29th discovered a strange difference from the observation made on the 27th by the assistant; I requested him to examine my bisection, when—the cause of disagreement was fully explained, by his reading off the *complimental* number of divisions from the micrometer head instead of the true;—I might readily by allowing for this, set the matter right, but since the collimation error appears unchanged, I have preferred cancelling the ref. coll. observations.
	12		11,45	10,86	
	13	0,59	12,07	11,48	
	14		11,57	10,98	
	15	0,64	10,97	10,33	
	16	0,85			
	17		11,31	10,46	
	18	1,06	10,80	9,74	
	19		10,45		
	22	1,53	10,80	9,27	
	23	1,36	10,28	8,92	
	24	1,20	10,37	9,17	
	26	1,38	10,71	9,33	
	27	1,57	10,63	9,06	
	28			———	
	29	1,39	14,32	12,93	
Sept.	6	1,39	14,24	12,85	
	7	2,21			
	9	1,83	14,32	12,49	
	11	1,78	14,49	12,71	
	13	1,83	14,83	13,00	
	15	1,87	15,18	13,31	
	17	2,01	15,18	13,17	
	19	2,15	15,36	13,21	

* This is omitted in taking the Mean.

Digitized by Google

1836.	L+P	Ref. Col. / 2 or C+L	Diff. or C—P	REMARKS, &c.
	″	″	″	
Sept. 21	+1,93	+ 15,36	+ 13,43	
23	1,65			
26	2,52	15,01	12,49	
29	2,59	14,83	12,24	
Oct. 1				
2	2,36			
3	2,12	15,18	13,06	
6	2,23	15,01	12,78	Mean of 14 = +12″,86
8	2,92	15,35	12,43	— 0,70
		——	——	∴ C = +12,16
10	2,23	12,60	10,37	
12	1,69	13,38	11,69	
14	1,44	13,12	11,68	
16	1,17	13,12	11,95	
19	1,81	12,95	11,14	
21	1,97	12,95	10,98	
24	2,03	13,21	11,18	
26	1,92	13,29	11,37	Mean of 9 = +11″,25
29	3,73	14,66	10,93	— 0,70
30				∴ C = +10,55

A hurricane had shattered the S. E. door of the Observatory to pieces, and broken the micrometer screw of the Transit Instrument—

1836.

Nov. 5, Put in a new set of wires and adjusted the collimation of the centre wire by means of the reflecting collimator.

9, Examined the position of the axis of collimation by the ref. coll.—found correct.
12, do. do. do. do.
17, do. do. do. do.
22, do. do. found the wire a little to the E. adjusted it.
Dec. 1, do. do. found the wire a little to the E. adjusted it.
6, do. do. do. found correct.
9, do. do. do. do. do.
13, do. do. do. do. do.
21, do. do. do. do. do.
24, do. do. do. do. do.

1837.

Jany. 2, do. do. found the wire a little to the E. adjusted it.
9, do. do. do. found correct.
14, do. do. found the wire a little to the E. adjusted it.
18, I purposely moved the wires about 10″ to the East.

Digitized by Google

1837.		L—P	Ref. Col. / 2 or C+L	Diff. or C+P	REMARKS, &c.
		″	″		
Jan.	18	+2,67	—10,78	—13,45	
	22	2,61	9,45	12,06	
	25	2,55	10,34	12,89	
	31	2,15	9,51	11,66	
Feb.	4	2,50	8,31	10,81	Mean of 7 = —11″,48
	7	2,47	7,00	9,47	P = — 0,70
	10	4,20	5,84	10,04	C = —10,78 By invers. C = —10″,04
	10	4,20	10,62	14,82	Increased the coll. error.
	14	4,37	10,63	15,00	
	16	4,02	11,28	15,30	
	21	3,20			
	27	4,11	10,63	14,74	Painted the Transit Instrument.
March	4	4,76	10,52	15,28	
	9	3,91	11,11	15,02	
	13	3,21	11,60	14,81	
	17	3,35	10,95	14,30	Inverted the axis twice, when C was found —14″,82
	21	2,70	11,93	14,63	
	24	2,79	12,59	15,38	I took out the object glass to remove a screw which was rattling about on the inside of the telescope; the screw appeared to belong to the rackwork motion employed for moderating the light;—after which by inversion I found C = — 14″,50.
	28	3,16	11,76	14,92	
	31	1,91	13,27	15,18	
April	3	1,70	13,58	15,28	
	6	1,62	14,90	16,52	
	9	1,17	14,65	15,82	
	12	1,95	13,66	15,61	
	15	1,90	13,08	14,98	
	18	1,36	13,08	14,44	
	18	2,41	11,44	13,85	Mean = —15″,07
	24	1,04	14,44	15,48	P = — 0,70
	27	0,88	11,93	12,81	∴ C = —14,37
	30	1,38	11,93	13,31	
May	3	0,78	12,35	13,13	
	6	0,75	12,35	13,10	
	9	0,66	12,93	13,59	
	12	0,27	12,43	12,70	Mean of 7 = —13″,09
	15	—0,25	13,25	13,00	P = — 0,70
					∴ C = —12,39
	18	+0,07	11,44	11,51	Hot land winds set in.
	21	0,74	10,83	11,57	
	24	1,00	10,67	11,67	
	27	0,16	10,94	11,10	
	30	1,84	11,52	13,36	
June	2	2,69	10,73	13,42	
	5	0,93	11,19	12,12	
	8	0,78	11,44	12,22	Mean of 10 = —11″,94
	11	0,55	11,11	11,66	P = — 0,70
	14	0,07	10,70	10,77	∴ C —11,24
	17	1,12	11,35	12,47	

Digitized by Google

1837.	L+P	Ref. Col. 2 or C+L	Diff. or C+P	REMARKS, &c.
	″	″	″	
June 20	+0,58	—11,27	—11,85	
23	1,28	11,77	13,05	
26	1,23	11,44	12,67	
29	0,97	11,10	12,07	
July 2	0,72	11,44	12,16	
5	1,10	10,45	11,55	
8	0,74	11,60	12,34	
11	0,95	11,11	12,06	Mean of 10 = —12,23″
14	1,21	10,86	12,07	P = — 0,70
			———	∴ C = —11,53
17	0,88	11,11	11,99	
20	1,47	11,60	13,07	On this day I left Madras, for the purpose of making observations of the magnetic dip and intensity, towards the South, along the coast of India; the observations of the reflecting collimator were made during my absence by *Ragavachariar Bramin.*
23	1,48	10,37	11,85	
26	1,42	10,29	11,71	
29	1,03	10,13	11,16	
August 1	0,84	10,94	11,78	
4	1,82	10,62	12,44	
7	2,41	10,29	12,70	
10	1,64	10,29	11,93	
13	1,73	10,78	12,51	
16	1,83	11,44	13,27	
19	1,90	11,52	13,42	
22	1,38	10,45	11,83	
25	1,50	9,46	10,96	Mean of 16 = —12,28″
28	1,86	10,86	12,72	P = — 0,70
31	1,82	11,27	13,09	C = 11,58
			———	
Sept. 3	1,05	13,58	14,63	I should hesitate to employ these numbers, from the strong probability they exhibit of error having been committed in the readings of the reflecting collimator—were it not that the following note is appended to the observation of the 3d September by the Assistant *Ragavachariar Bramin.* "*The equal distances from wire to wire is broad than before.*"*
6	1,75	13,17	14,92	
9	1,45	13,99	15,44	
12	1,40	13,83	15,23	
			———	
15	1,39	12,10	13,49	
18	1,26	12,27	13,53	
21	0,91	11,62	12,53	
24	0,84	10,29	11,13	
27	1,60	11,60	13,20	
30	0,50	11,44	11,94	
Oct. 3	2,17	11,77	13,94	
6	2,26	12,11	14,37	
9	2,13	11,52	13,65	
12	1,90	11,44	13,34	
15	1,87	11,19	13,06	
18	2,27	11,69	13,96	
21	2,60	10,62	13,22	
24	2,50	10,86	13,36	
27	2,38	11,02	13,40	
30	2,60	10,94	13,54	
Nov. 2	6,78	5,67	12,45	Mean of 18 = —13,14″
5	6,82	5,67	12,49	P = — 0,70
			———	∴ C = —12,44

* Given *verbatim et litteratim* from the Level Book.

1837.	L+P	Ref. Col. / 2 or C+L	Diff. or C+P	REMARKS, &c.
	"	"	"	
Nov. 8	+6,74	—5,18	—11,92	
11	5,90	5,34	11,24	
14	5,56	5,18	10,74	
17	5,10	6,00	11,10	
20	4,78	6,50	11,28	
23	5,18	5,89	11,07	
26	5,29	5,51	10,80	
29	5,00	5,67	10,67	
Dec. 2	5,09	5,51	10,60	
5	4,99	5,43	10,42	
8	5,33	5,87	11,20	
11	5,70	5,95	11,65	
14	3,58	7,90	11,48	
17	2,85	7,98	10,83	
20	2,25	10,12	12,37	
23	2,50	9,79	12,29	
26	2,40	9,79	12,19	Mean of 18 = —11",29
29	1,99	9,46	11,45	P = — 0 ,70
				C —10 ,59

In the reduction of the observations, these *mean* values of C, together with the reduction to the centre wire (given at pages 1—3), and the correction for Diurnal Aberration, have been applied to each observation; thus, for any day in December 1837, the correction in time $= -\frac{,706 + ,053 + ,020}{\sin \text{N. P. D.}} = -\frac{0,779^s}{\sin \text{N. P. D.}}$

ERROR OF AZIMUTH.

If the Transit Telescope be directed to the north horizon, the deviation of the centre wire from the meridian mark is represented by N + C,—(where C represents the error of collimation); and, if a represent the angular deviation of the meridian mark from the meridian,—

The deviation of the centre wire from the Meridian

as exhibited by the North Mark will be $= \pm a \pm N \pm C$

similarly—— ——South Mark will be $= \pm a' \pm S \mp C$

and the mean result will be $a = \frac{\pm a \pm a' \pm N \pm S}{2}$

In Volume III p. 20, the value of $a - a'$ was found 93",52, and, since we have found (page 5) the value of $a + a'$ to be —26",03, we may state the North

Mark to be situated 33",74 to the *West* of the Meridian, and the South Mark to be situated 59",77 to the *East* of the Meridian.

The observations of 1836 furnish a few transits of Polaris with which we will now re-examine the above values—

POLARIS.

1835.	Observed Transit.	Clock Error.	Aberration &c.	Correction for Level.	Correction for Collimation.	Mean Right Ascension January 1, 1836.
	h. m. s.	m. s.	s	s	s.	h. m. s.
Dec. 24	1 2 2,87	—1 10,27	+3,99	—2,47	+23,75	1 1 17,87 + a × 2,370
25	2,99	12,90	4,81			16,19 a^{i} ——
26	7,27	15,15	5,61			19,01 a^{ii} ——
27	7,17	15,98	6,38			18,85 a^{iii} ——
28	8,99	17,37	7,13			20,03 a^{iv} ——
29	9,71	18,10	7,82			20,71 a^{v} ——
30	8,75	19,10	8,50			19,43 a^{vi} ——
31	6,82	20,80	9,20			16,50 a^{vii} ——
1836.						
Jan. 2	8,53	21,83	10,64	—2,31	+25,44	21,47 a^{ix} ——
3	8,08	22,82	11,40			19,79 a^{x} ——
4	9,50	23,48	12,19			21,34 a^{xi} ——
6	4,33	23,23	13,91			18,14 a^{xiii} ——
7	3,83	22,20	14,80			19,56 a^{xiv} ——
8	59,27	20,62	15,69			17,47 a^{xv} ——
10	56,67	18,08	17,39			19,11 a^{xvi} ——

where a^{i}, a^{ii}, &c. represent the Azimuth errors in seconds of space.

POLARIS. S. P.

1835.	Observed Transit.	Clock Error.	Aberration &c.	Correction for Level.	Correction for Collimation	Mean Right Ascension January 1, 1836.
	h. m. s.	m. s.	s.	s.	s.	h. m. s.
Dec. 25	13 2 25,00	—1, 14,35	+5,21	+1,95	—23,75	13 0 54,07 —a^{i} × 2,408
26	22,95	16,15	6,00			51,00 a^{ii} ——
27	23,31	16,67	6,75			51,59 a^{iii} ——
28	21,48	17,73	7,47			49.42 a^{iv} ——
29	24,53	18,55	8,16			52,34 a^{v} ——
30	27,82	19,90	8,85			54,97 a^{vi} ——
1836.						
Jan. 1	28,93	21,50	10,29	+1,83	—25,44	54,11 a^{viii} ——
3	27,67	23,24	11,80			52,62 a^{x} ——
5	26,88	23,30	13.48			53,45 a^{xii} ——
6	29,35	22,71	14,36			57,39 a^{xiii} ——

We have found above, that any value $a, = \frac{a \pm a'}{2} + \frac{N \pm S}{2}$; in which,—substituting for $\frac{N-S}{2}$, the values found at page 10 &c. we determine.

1835	December	24 ——	a	= 42,27 —	$\frac{a-a'}{2}$
		25 ——	a^{i}	= 42,27 —	——
		26 ——	a^{ii}	= 41,25 —	——
		27 ——	a^{iii}	= 41,33 —	——
		28 ——	a^{iv}	= 41,45 —	——
		29 ——	a^{v}	= 41,43 —	——
		30 ——	a^{vi}	= 41,26 —	——
		31 ——	a^{vii}	= 41,23 —	——
1836	January	1 ——	a^{viii}	= 41,29 —	——
		2 ——	a^{ix}	= 41,28 —	——
		3 ——	a^{x}	= 41,43 —	——
		4 ——	a^{xi}	= 41,33 —	——
		5 ——	a^{xii}	= 41,46 —	——
		6 ——	a^{xiii}	= 41,34 —	——
		7 ——	a^{xiv}	= 41,30 —	——
		8 ——	a^{xv}	= 41,36 —	——
		10 ——	a^{xvi}	= 41,35 —	——

employing these values of a, a' &c. with the above observations, we obtain the

MEAN A. R. OF POLARIS, JAN. 1, 1836.

From observations at the superior culmination.	*From observations at the inferior culmination.*

$$\overset{h.}{*1}\ \overset{m.}{1}\ \overset{s.}{19{,}03} + \left(\overset{\prime\prime}{41{,}46} - \frac{a-a^{1}}{2}\right) \times 2{,}370 = \overset{h.}{1}\ \overset{m.}{0}\ \overset{s.}{53{,}10} - \left(\overset{\prime\prime}{41{,}45} - \frac{a-a^{1}}{2}\right) \times 2{,}408$$

from which we readily deduce $a - a^{1} = 93'',76$; or $a = 33'',87$ and $a^{1} = -59'',89$, agreeing very nearly with the hitherto supposed values. In the reduction of the Observations from January 1st to March 16th 1836, the Azimuth correction has consequently been computed from the formulæ $\frac{N - S - 93'',76}{2}$

For the remaining days of the month of March, and up to the end of October 1836,—in consequence of the difficulty of keeping the South Mark in view, (as has been already explained), the distance of the centre wire from the North Mark, or $a \pm N \pm C$ only, was observed; (in which, a has been assumed 33″,87 as just found, and the values of C have already been given at p. 11 &c). On the 3rd November 1836,—being deprived of the means of measuring the distance of the centre wire from the meridian mark,—as a temporary measure, I adjusted it to the eastern side of it, (as being more nearly in the meridian than its centre); finding however that the azimuth corrections was still inconveniently large,—on the 22d November the Instrument was adjusted to a temporary circular disc, which I had caused to be affixed to the pier which had hitherto supported the old mark; I had intended to have placed this new mark "in the meridian", but from some mistake in the measurement, an alteration of only half the required amount was made;—to remedy this, on the

---

* Mean A. R. January 1, {1836 — 1 h. 1 m. 6,06 s.; 1837 — 22,15}

8th December 1836, I adjusted the Instrument to another mark—(a parallelogram), which I had caused to be permanently affixed to the pier, at a still further distance from the old mark, towards the east; this being conveniently situated,—from the 8th December 1836 I have continued to adjust the centre wire when necessary to the mark, instead of measuring as hitherto its distance from it. Calling a'', the azimuth from the meridian, of the side of the old mark, to which the instrument was adjusted from the 3d to the 22d November inclusive; a', the azimuth of the circular disc employed from 23d November 1836 to 17th January 1837, and a, the azimuth of that since employed we can,—from the observations of *Polaris* made about this time, compute their values.

POLARIS.

1836	Observed Transit.	Clock Error.	Aberration &c.	Correction for Level	Correction for Collimation.	Mean Right Ascension January 1, 1837.
	h. m. s.	m. s.	s.			h. m. s.
Nov. 7	1 0 31,00	+ 1 36,35	—17,55	....	....	1 1 49,80 —a'' × 2,368
9	0 39,00	1 27,99	16,92	....	....	50,07 —— ——
10	0 45,00	1 24,11	16,58	....	....	52,53 —— ——
11	0 47,00	1 21,57	16,23	....	....	52,34 —— ——
12	0 49,00	1 19,65	15,87	....	....	52,78 —— ——
Dec. 5	1 18,00	0 24,78	4,56	....	....	38,23 —a' × 2,370
6	1 23,65	0 19,50	3,93	....		39,22 —— ——
7	1 31,67	0 16,60	3,29	....	....	44,98 —— ——
10	1 27,20	0 4,25	1,37			30,08 —a × 2,370
11	1 23,00	0 3,23	0,72			25,61 —— ——
12	1 25,00	0 2,24	0,05			27,19 —— ——
17	1 25,10	1 2,73	+ 3,42		....	30,25 —— ——
18	1 21,00	1 6,42	4,12	....	....	31,54 —— ——
19	1 16,00	1 10,12	4,82	....	....	30,94 —— ——
20	1 10,00	1 13,67	5,55	....	....	29,22 —— ——
21	1 8,00	1 17,22	6,28	....	....	31,50 —— ——
23	1 0,00	1 24,46	7,77	....	....	32,23 —— ——
24	0 59 56,00	1 27,88	8,50	....	....	32,36 —— ——
26	59 50,00	1 34,52	9,98	....	....	34,50 —— ——
31	59 28,00	1 49,40	13,81	....	....	31,21 —— ——
1837						
Jan. 2	59 20,00	1 53,39	15,40	....	....	28,79 —— ——
3	59 19,00	1 54,12	16,21	....	....	29,33 —— ——
4	59 15,00	1 55,88	17,01	....	....	27,89 —— ——
5	59 12,00	1 56,76	17,81	....	....	26,57 —— ——
6	1 2 12,00	— 1 2,50	18,59	....	....	28,09 —— ——
7	2 14,00	1 1,40	19,40	....	....	32,00 —— ——
8	2 8,50	1 0,05	20,20	....	....	28,65 —— ——
9	2 6,17	0 58,60	20,99	....	....	28,56 —— ——
10	2 10,50	0 57,10	21,78	....	....	35,18 —— ——
11	2 5,25	0 55,60	22 57	....	....	32,22 —— ——
12	2 2,75	0 53,66	23,37	....	....	32,46 —— ——

Digitized by Google

POLARIS S. P.

1836.	Observed Transit.	Clock Error.	Aberration &c.	Correction for Level.	Correction for Collimation.	Mean Right Ascension January 1, 1837.
	h. m. s.	m. s.	s.			h. m. s.
Dec. 20	13 0 55,75	+1 15,44	+5,92	....	....	13 1 17,11—a × 2,408
26	12 59 30,00	1 36,00	10,37	....	....	16,37—
1837						
Jan. 2	12 59 14,00	1 53,75	15,81	....	....	23,56—
3	59 13,00	1 55,00	16,61	....	....	24,61—
4	59 3,25	1 56,32	17,41	....	....	16,97—
5	13 2 4,33	—1 3,63	18,20	....	....	18,90—
6	1 59,00	1 1,95	18,99	....	....	16,04—
7	1 52,17	1 0,62	19,80	....	....	11,35—
8	1 51,25	0 59,32	20,59	....	....	12,52—
9	1 55,25	0 57,85	21,38	....	....	18,78—
10	1 50,75	0 56,21	22,17	....	....	16,71—
11	1 50,50	0 54,63	22,97	....	....	18,84—

Taking the mean, we have from

			Mean A. R. Polaris January 1, 1837.
			h. m. s.
5 observations above Pole	....	....	1 1 51,50 $\pm a''$ × 2,368
3 ——— —— —	....	....	1 1 40,81 $\pm a'$ × 2,370
23 ——— —— —	....	....	1 1 30,28 $\pm a$ × 2,370
12 ——— below —	....	....	13 1 17,65 $\pm a$ × 2,408

For the determination of a'' and a' we must now employ the already found mean place for January 1, 1837 = 1*h.* 1*m.* 22,15*s.*

when $a'' = 12'',40$ West
$a' = 7'',87$ ——
$a = 2'',64$ ——

As a confirmation of the value of a, I have lately measured the angular distance between the old mark and the one now in use, when, from the mean of several measures—

The new mark appeared to be situated 31″,29 to the East of the old mark.
The old mark we have found to be 33″,87 West of the meridian.
∴ The new mark is situated 2″,58 West of the meridian.

And for a confirmation of the situation of the mark which gave rise to the value a'',—this I find to be situated 21″,97 East of the old mark.
The old mark is situated 33″,87 West of the meridian.
∴ a'' = 11″,90 West of the meridian.

We will now proceed with the values of N & S given at page 11 &c. to compute the values of (A,) the deviation in Azimuth—

Digitized by Google

1836.	N—S	A or $\frac{N-S-93'',76}{2}$	REMARKS, &c.	1836.	N—S	A or $\frac{N-S-93'',76}{2}$	REMARKS, &c.
	′ ″	″			′ ″	″	
Jan. 1	1 22,59	—5,58		Feb. 4	1 22,36	—5,70	
2	22,56	5,60		5	22,29	5,73	
3	22,86	5,45		6	22 60	5,58	
4	22,66	5,55		7	22,50	5,63	
5	22,93	5,41		8	22,47	5,64	
6	22,69	5,53		9	22,49	5,63	
7	22,59	5,58		10	22.50	5,63	Mean of 10 = — 5″,63
8	22,73	5,51		11	22,64	5,56	
9	22,83	5,47		12	22,93	5,41	
10	22,70	5,53	Mean of 10 = — 5″,21	13	23,34	5,21	
11	22,50	5.63		14	23,04	5,36	
12	22,63	5,56		15	23,58	5,09	
13	22,74	5,51		16	23,50	5,13	
14	22,35	5,70		17	23,54	5,11	
15	22,08	5.84		18	23,44	5,16	
16	22,24	5,76		19	23,21	5.27	Mean of 9 = — 5″,26
17	22,32	5,72		20	24,59	4,59	I took out the object
18	21,94	5,91		21	24,95	4.40	glass to clean it.
19	21,87	5,94		23	25,30	4,23	
20	22,12	5,82	Mean of 10 = — 5″,74	24	24,32	4,72	
21	22.42	5,67		25	24,62	4,57	
22	22,32	5,72		26	24,38	4,69	
23	22,19	5,78		27	24,46	4,65	
24	22,70	5.53		28	24,28	4,74	
25	22,18	5,79		29	24,06	4.85	
26	22.32	5,72		March 1	23,87	4,94	
27	22,53	5,61		2	24,00	4,88	
28	22,53	5.61		3	24,14	4,81	
29	22,80	5,48		4	24,06	4,85	
30	22,70	5,53	Mean of 10 = — 5″,64	8	23,62	5,07	
31	22,73	5,51		10	23.93	4,91	
Feb. 1	22,49	5,63		15	23.82	4,97	
2	22,42	5,67		16	24,14	4,81	Mean of 17 = — 4″,75

The South Mark being invisible (by reason of trees having grown in the way), the observation of the North Mark only will be attended to in future.

1836.	N	C	N—C—33″,87 = A	REMARKS.	1836.	N	C	N—C—33″,87 = A	REMARKS.
	″	″	″			″	″	″	
Mar.22	+38,42	+ 8,62	—4,07		Mar.30	+38,32	+ 8,62	—4,17	
23	38,12	..	4,37		31	38,29	..	4.20	
24	38,39	..	4,10		April 1	38,39	..	4,10	Mean of 10 = — 4″,20
25	38,32	..	4.17		2	38,39	..	4,10	
26	38,42	..	4,07		3	38,32	..	4,17	
28	38,18	..	4,31		4	38,18	..	4,31	
29	38,08	..	4,41		5	38,18	..	4,31	

Digitized by Google

1836.	N	C	N—C—33″,87 = A	REMARKS.	1836.	N	C	N—C—33″,87 = A	REMARKS.
	″	″	″			″	″	″	
April 6	+38,25	+ 8,62	—4,24		May 29	+43,13	+12,51	—3,25	
7	38,15	..	4,34		30	43,31	..	3,07	Mean of 11 = — 3″,45
8	38,22	8,80	4,45		31	43,13	11,45	2,19	
9	38,46	..	4.01		June 1	43,21	..	2,11	
10	38,25	..	4,42		2	43,34	..	1,98	
11	38,36	..	4.31	Mean of 10 = — 4″,27	3	43,13	..	2,19	
12	37.91	..	4,76		4	43,06	..	2,26	
13	37,98	..	4,69		5	43.34	..	1,98	
14	38,29	..	4,38		6	43,95	..	1,37	
15	38,42	..	4,25		7	43,56	..	1,76	
16	38,35	..	4,32		8	43,45	..	1,87	
17	38,65	..	4,02		9	43,56	..	1,76	
18	38,39	..	4,28		10	43,56	..	1,76	
19	38,42	..	4,25		11	43,24	..	2,08	
20	38,29	..	4,38		12	43,49	..	1,83	
21	38,18	..	4,49	Mean of 10 = — 4″,38	13	43,31	..	2,01	Mean of 14 = — 1″,94
22	38,49	..	4,18		14	43,13	..	2,19	
23	38,46	9,16	4,57		15	42,65	..	2,67	
24	38,70	..	4,33		16	42,62	..	2,70	
25	38,78	..	4,25		17	42,83	..	2,49	
26	38,81	..	4,22		18	42,96	..	2,36	
27	38,87	..	4,16		19	42,89	..	2,43	
28	38,66	..	4,37		20	43,13	..	2,19	
29	38.52	..	4,51		21	42.99	..	2,33	
30	38,66	..	4,37	Mean of 10 = — 4″,37	22	43,28	..	2 04	
May 1	38,29	..	4,74		23	42,86	..	2,46	Mean of 10 = — 2″,39
2	38.22	..	4,81		24	42,86	..	2,46	
3	38.66	..	4,37		25	42,76	..	2,56	
4	38,49	..	4,54		26	42,96	..	2,36	
5	38,42	..	4,61		27	42,96	..	2,36	
6	38,35	..	4,68		28	42,99	..	2,33	
7	38.35	..	4,68		29	42,86	11,59	2.60	
8	38,94	..	4,09		30	42,89	..	2,57	
9	38,84	..	4,19		July 1	42,62	..	2,84	
10	41,07	12,51	5,31		2	43,21	..	2,25	
11	41,97	..	4,41	Mean of 10 = — 4″,57	3	43,13	..	2,33	Mean of 10 = — 2″,47
12	41,68	..	4,70		4	42,89	..	2,57	
13	42,00	..	4,38		5	43.06	..	2,40	
14	42,24	..	4,14		6	43,24	..	2,22	
15	41,79	..	4,59		7	43,17	..	2,29	
16	41,61	..	4,77		8	43,14	..	2,32	
17	41,93	..	4,45		9	43.31	..	2,15	
18	42,30	.	4,08		10	43,31	..	2,15	
19	42,33	..	4,05	Mean of 8 = — 4″,39	11	43,31	..	2,15	
20	42,65	..	3,73		12	43,31	..	2,15	
21	42,72	..	3,66		13	43,59	..	1,87	Mean of 10 = — 2″,23
22	42,86	..	3,52		14	43,41	..	2,05	
23	42,86	..	3,52		15	43.66	..	1,80	
24	42,96	..	3,42		16	43,73	..	1,78	
25	42,89	..	3,49		17	43,83	..	1,63	
26	42,93	..	3,45		18	43,91	..	1,55	
27	42,86	..	3,52		19	43,76	..	1,70	
28	43,03	..	3,35		20	43,73	..	1,73	
		..							

Digitized by Google

1836.	N	C	N—C—33″,87 = A	REMARKS.
	″	″	″	
July 21	+43,66	+11,59	—1,80	
22	43,54	..	1,92	Mean of 9 = — 1″,77
23	43,54	10,40	0,73	
24	43,38	..	0,89	
25	43,56	..	0,71	
26	43,59	..	0,68	
27	43,63	..	0,64	
28	43,59	..	0,68	
30	43,87	..	0,40	
31	43,69	..	0,58	
Aug. 1	43,48	..	0,79	
2	43,66	..	0,61	Mean of 10 = — 0″,67
3	43,63	..	0,64	
4	43,31	..	0,96	
5	43,34	..	0,93	
6	43,52	..	0,75	
7	43,34	..	0,93	
8	43,17	..	1,10	
9	43,69	..	0,58	
10	43,69	..	0,58	
11	43,34	..	0,93	
12	43,41	..	0,86	Mean of 10 = — 0″,83
13	44,01	..	0,26	
14	43,66	..	0,61	
15	43,52	..	0,75	
16	43,69	..	0,58	
17	43,80	..	0,47	
18	43,83	..	0,44	
19	43,90	..	0,37	
20	43,80	..	0,47	
21	43,69	..	0,58	
22	43,59	..	0,68	Mean of 10 = — 0″,52
23	43,90	..	0,37	
24	43,63	..	0,64	
25	43,63	..	0,64	
26	43,69	..	0,58	
27	45,30	12,16	0,73	Mean of 5 = — 0″,59
28	44,34	..	1,69	
29	44,07	..	1,96	
30	44,14	..	1,89	
31	44,07	..	1,96	
Sep. 1	44,08	..	1,95	
2	43,87	..	2,16	
3	43,90	..	2,13	Mean of 7 = — 1″,96
4	43,21	..	2,82	
5	43,48	..	2,55	
6	43,55	..	2,48	
7	43,76	..	2,27	
8	43,21	..	2,82	

1836.	N	C	N—C—33″,87 = A	REMARKS.
	″	″	″	
Sep. 9	+43,21	+12,16	—2,82	
10	43,31	..	2,72	
11	43,13	..	2,90	
12	43,00	..	3,03	
13	42,89	..	3,14	Mean of 10 = — 2″,75
14	42,77	..	3,26	
15	43,28	..	2,75	
16	43,03	..	3,00	
17	43,17	..	2,86	
18	43,20	..	2,83	
19	43,03	..	3,00	
20	43,31	..	2,72	
21	43,03	..	3,00	
22	43,38	..	2,65	
23	43,31	..	2,72	Mean of 10 = — 2″,88
24	43,34	..	2,69	
25	43,37	..	2,66	
26	43,31	..	2,72	
27	43,03	..	3,00	
28	43,06	..	2,97	
Oct. 2	42,88	..	3,15	
3	43,39	..	2,64	
4	43,00	..	3,03	
5	43,38	..	2,65	
6	42,96	..	3,07	
7	43,13	..	2,90	
8	43,31	..	2,72	
9	43,62	..	2,41	Mean of 13 = — 2″,81
10	39,18	10,55	5,24	
11	39,28	..	5,14	
12	39,45	..	4,97	
13	39,55	..	4,87	
14	39,52	..	4,90	
15	39,76	..	4.66	
16	40,46	..	*3,96	
17	39,76	..	4,66	
18	39,93	..	4,49	
19	39,79	..	4,63	
20	39,52	..	4,90	
21	39,93	..	4,49	
22	39,86	..	4,56	
23	39,79	..	4,63	
24	39,59	..	4,83	
25	39,67	..	4.65	
26	40,03	..	4,39	
27	40,18	..	4,24	
28	40,36	..	4,06	
29	39,66	..	4,76	Mean of 19 = — 4″,68

* This is omitted in taking the Mean.

On the 3rd November 1836 the centre wire was brought to touch the *edge* of the North mark; hence, *from this date up to the* 21*st November* 1836 *the Instrumental error in Azimuth* was NORTH 12″,40 WEST.

On the 22d November I adjusted the centre wire to bisect a mark which had been erected to the East of the above;—hence, as has already been shewn; —*from this date up to the* 7*th December* 1836 *the Instrumental error in Azimuth was* NORTH 7″,87 WEST.

On the 8th December the Instrument was adjusted to a permanent mark› which I had caused to be erected nearly in the direction of the meridian, upon the old Northern Pier; hence;—

from the 8th December 1836 to 17th January 1837 the Instrumental error in Azimuth was } N 2″,64 W.

In the intervals just alluded to, the coincidence of the centre wire with the mark was examined every day at Sun rise and Sun set, and on two occasions—On January 6th, and 8th, a small correction of the bisection was made for a deviation to the East of the meridian.

Since the 18th January 1837, the coincidence of the centre wire with the mark has been examined every day at Sun rise and Sun set, and adjustment made when necessary; hence, if C represent the error of Collimation, the Azimuth error $A = C \pm 2'',64$; thus—

1837	C ″	A ″	
Jan. 18 to Feb. 10	—10,78	— 8,14	I increased the Collimation, and consequently the Azimuthal error.
Feb. 10—April 26	14,37	11,73	In this interval no adjustment to the mark was found necessary.
April 27—May 15	12,39	9,75	On the 27th April, an adjustment was made for a deviation of about 2″ to the East of the N. Meridian.
May 16—June 14	11,24	8,60	In this interval no adjustment to the mark was found necessary.
June 15—July 14	11,53	8,89	On the 25th June, at Sun set, adjustment was made for a deviation of about 1″ to the West of the N.
July 15—Aug. 31	11,58	8,94	Observed by my head assistant *Ragavachariar*—No adjustment to the meridian was necessary during this period.
Sept. 1—Sept. 12	15,06	12,42	Observed by *Ragavachariar* (see p. 16) but an adjustment necessary—It happens fortunately, that during this doubtful period, it was cloudy weather.
Sept. 13—Nov. 5	12,44	9,80	Up to October, 15th, the observations were made by *Ragavachariar*—to whom I had entrusted them during my absence, with orders not to attempt an adjustment, but to make an estimate of the errors if any:—his remarks are as follows— "September 21st *morning being Astronomical day—The centre wire does not bisect the mark,*" appended to this is a drawing of the appearance of the mark and wire, from which I estimate that a deviation of 1″ to the East

			then existed; but on the evening of the same day he remarks— "22nd We *can not find that difference but it was seen right as before.*"
Nov. 6—Dec. 31	10,59	7,95	An adjustment was made on the 13th for a deviation of about 1″ to the West.

REDUCTIONS EMPLOYED.

The places of the known stars have been corrected for Aberration, Nutation, and Precession, from the values of *a, b, c, d,* &c. given in the Royal Astronomical Society's Catalogue, in conjunction with those of A, B, C, D, furnished in the Nautical Almanac; save that a correction has been made when necessary to adapt these latter values to the instant of the Star's Transit.

The table of Refractions employed, is that constructed by *Mr. Henry Atkinson,* and printed in the 2d Volume of the Astronomical Society's Memoirs, using the "*in door*" thermometer:—The remaining corrections for the Sun or Planets, have been derived either from the Nautical Almanac, or from Mr. Baily's Astronomical Tables.

In the reduction of the Moon's Place, the ratio of the Polar and Equatoreal Axes of the Earth has been taken at 299 : 300

from which we get *the angle of the vertical* = 5′ 0″
——————————Radius of the Earth = ,999825

ERROR AND RATE OF THE TRANSIT CLOCK.

The error of the Transit Clock has been determined with reference to the Madras Results given in Vol. II.; selecting those stars only which have been frequently observed—which are situated near to the Equinoctial, and which differ less than one tenth of a second from the Greenwich Catalogue.*

In general it has been my custom to divide the hours of observing into "*watches*" of three hours each, and to observe during each *watch*--three of these

* The Greenwich Catalogue here alluded to, refers to that of 720 Stars for 1830, published in 1829 or 1830—there have (I believe) been later catalogues issued from the Greenwich Royal Observatory, but I have not been so fortunate as to obtain a copy.

Digitized by Google

stars for the determination of the Clock Error;—by this arrangement, any irregularity in the going of the Clock is rendered of little consequence, since the rate is trusted only for one and a half or two hours at most; with regard to the Sun, and the Planets Mercury and Venus,—it frequently happens from clouds or haze, that no star has been observed within 6 or 8 hours of their passage; in this case—when the rate has appeared irregular, I have cancelled the observation. In the comparison of the errors of the Clock on one night, with those of another, for the rate, as well as in their employment for the determination of the places of the unknown Stars, it has always been my custom to compare the results of each observer with his own observations only; by which means, the *direct* influence of *personal equation* is avoided; from a recent examination however, I am happy to find that this perplexing and unaccountable source of error, reaches to a very trifling amount in the observations composing the present volume.

In a former volume I mentioned having endeavored to exclude insects from the works of the clock, by making the case as nearly as practicable, air tight; in this particular however I have since been compelled to relax a little, in consequence of the extremely faint beat of the clock—being lost by the unavoidable noise of the observer at the circle, or by the least noise of natives or conveyances passing in the road; the result has been, that on two occasions during the last two years, I have been able satisfactorily to account for the ill going of the clock, by finding a spider's line attached to the pendulum; at other times—other causes apparently have operated; thus, on the 27th January 1836 the clock was cleaned, when from some cause not apparent, it continued to lose on its rate until the 8th March, when it was regulated; after this it continued to lose further upon its rate until the 1st May, when the thick state of the oil upon the escapement was the only apparent circumstance to account for the previous ill going; the oil I had applied was ordinary salad oil, but the temperature of from 95 to 105 Fahrenheit (which is usual for several hours during the day at this time of the year) fully accounts for its having become thick.

Digitized by Google

1836.	Daily Rate.	REMARKS.	1836.	Daily Rate.	REMARKS.
	s			s	
Jan. 3	+1,01		Feb. 25	—4,88	
4	0,68		26	3,96	
6	—0,09		27	3,72	
7	1,17		28	4,71	
8	1,67		29	4,92	
9	1,26		Mar. 1	5,18	
10	1,23		2	4,99	
11	2,73		3	4,81	
13	4,80		5	5,44	
14	3,03		6	5,48	
15	4,27		7	5,46	
16	5,00		8		I regulated the Clock.
17	5,85		9	+1,01	
18	6,02		10	+1,01	
19	6,70		11	+0,18	
20	6.41		12	—0,31	
21	6,75		13	0,85	
22	6,60		14	3,70	
23	6,88		15	5,53	
24	7,20		16	5,61	
25	8,31		17	2,69	
26	7,18		18	2,33	
27		On cleaning the Clock I found	19	3,09	
28	1,90	a spider's line attached to	20	3,16	
29	2,34	the pendulum.	21	2,32	
30	1,55		22	2,83	
31	0,65		23	2,35	
Feb. 1	2,42		25	3,48	
2		Wound up the Clock.	26	4,02	
3	2,41		27	4,23	
4	2,41		28	4,18	
5	2,19		29	4,38	
6	3,20		30	4,59	
7	1,72		31	4,77	
8	1,10		April 1	4,72	
9	1,05		2	4,99	
10	0,98		3	4,94	
11	0,87		4	5,85	
12	0,76		5	5,36	
13	0,99		6	5,80	
14	1,73		7	5,25	
15	0,91		8	4,59	
16	1,42		9	4,85	
17	1,73		10	4,45	
18	2,21		11	4,44	
19	2,76		12	4,61	
20	3,20		13	4,88	
21	3,87		14	5,03	
22	3,38		15	5,07	
23	3.48		16	5,04	
24	3,64		17	5,10	

Digitized by Google

1836.	Daily Rate.	REMARKS.	1836.	Daily Rate.	REMARKS.
	s			s	
April 18	—5,77		June 19	—4,67	
19	5,38		20	4,25	
20	4,77		28	4,95	
21			30	4,73	
22	4,57		July 3	3,05	
23	4,88		4	3,84	
24	4,98		9	4,25	
25			10	3,52	
26	5,05		14	3,95	
27	5,38		15	4,70	
28	5,51		16	4,35	
29	5,83	Oil thick—cleaned and	17	5,22	
30	—5,04	regulated the clock.	18	2,22	Regulated the Clock.
May 1	+2,51		19	2,25	
2	2,76		22	2,47	
3	2,33		26	2,90	
4	2,33		27	1,63	
5	3,13		28	0,90	
6	2,86		30	0,92	
8	2,86		Aug. 2	0,08	
9	3,40		4	0,03	
11	5,75		9	+0,96	Continued cloudy weather.
15	3,29	Wound up the clock,	10	1,72	
16		put it back 3 minutes	11	1,45	
18	—5,75	and regulated it.	14	1,65	
19	4,17		16	2,13	
20	4,02		17	2,75	
21	4,27		19	2,21	
22	4,70		21	2,59	
23	4,00		23	3,51	
24	3,99		27	4,88	
25	4,29		28	4,54	Continued cloudy weather,
26	3,97		Sep. 6		I regulated the clock.
28	4,31		7	—4,26	
29	4,40		8	3,22	
30	4,33		9	3,64	
31	4,36		10	2,40	
June 1	3,99		11	2,54	
5	4,07		12	1,94	
6	3,86		13	1,55	
7	4,49		14	1,80	
8	4,69		15	0,59	
9	4,46		16	1,75	
10	5,00		20	2,02	
11	5,04		21	1,96	
12	5,17		23	2,78	
13	5,38		24	1,81	
14	5,02		25	2,75	
15	5,12		26	2,15	
17	4,00		30	2,00	
18	4,70		Oct. 1	2,66	

Digitized by Google

1836.	Daily Rate.	REMARKS.	1836.	Daily Rate.	REMARKS.
	s			s	
Oct. 2	—3,12		Dec. 19	—3,10	
3	3,88		20	3,43	
6	2,53		21	3,60	
7	1,70		23	3,66	
8	1,62		24	3,28	
9	2,12		26	3,43	
10	1,69		31	2,96	
11	2,16		1837.		
12	2,61		Jan. 1	1,72	
13	3,16		3	1,59	
14	3,33		4	1,42	
15	2,91		5		Put clock backward three minutes.
16			6	1,22	
17	3,10		7	0,87	
18	2,97		8	1,37	
19	0,61		9	1,59	
20	1,33		10	1,17	
21	1,52		11	1,17	
22	1,47		12	1,82	
23	1,70		13	1,46	
25	2,24		15	1,10	Wound up the clock.
26			19	3,44	
27	2,65		20	2,00	
28	2,80	Mostly cloudy weather. It blew a hurricane on the 31st.	21	2,19	
Nov. 7	+2,38		22	1,83	
8	3,53		23	1,30	
9	4,28		24	0,94	
10	4,20		25	0,90	
11	1,26		26	1,35	
12	1,78		27	1,30	
13	3,00		28	0,62	
18	3,20		29	1,07	
22	1,06		30	0,38	
23	1,00		31	1,20	
24	0,92		Feb. 2	—0,31	
25	0,52		3	+0,38	
26	0,38		4	—0,19	
27	0,48		5	+0,10	
28	0,78		6	—0,07	
29	3,00		7	0,09	
Dec. 1	2,65		8	1,73	
2	4,38		9	0,45	
3	3,99		10	0,57	
4	4,75		11	0,71	
5	5,13		12	0,88	
6		Wound up the clock and applied oil to the pallets.	13	—0,28	
10	2,85		14	+0,26	
11	0,58		15	0,28	
12	0,70		16	0,24	
17		Wound up the clock.	17	0,53	
18	—3,64		18	0,38	

Digitized by Google

1837.	Daily Rate.	REMARKS.	1837.	Daily Rate.	REMARKS.
	s.			s.	
Feb. 19	+0,19		April 18	—1,80	
20	1,38		19	1,76	
21	+0,22	Continued cloudy weather.	20	1,41	
26	—3,00		21	1,51	
27	3,49		22	2,00	
28	3,74		23	1,97	
Mar. 1	4,78		24	2,35	
2	5,00		25	2,20	
4	5,00		26	2,31	
5	4,18		27	2,25	
6	4,41		28	2,36	
7	4,73		29	3,00	
8	3,81		30	1,68	
9	3,96		May 1	2,76	
10	3,32		2	2,45	
11	4,42		3	1,91	
12	4,90		4	1,69	
13	5,35		5	2,16	
14	4,77		9	2,36	
15	4,69		10	2,41	
16	4,37		11	2,90	
17	3,95		12	2,47	
18	3,35		15	2,75	
19	4,20		16	2,68	
20	4,46		17	2,60	
21	3,53		18	2,20	
22	3,12		24	3,04	
23	4,77		28	3,07	
24	5,62		30	3,98	
25	5,16		31	3,37	
26	4,71		June 6	2,49	
27	3,63		7	1,98	
28	4,51		8	2,18	
29	6,44		9	2,80	
30	5,94		10	2,40	
31	6,75		11	2,82	
April 1	7,30		13	3,28	
2	6,44	I examined the clock and removed a fine thread which had been attached to the pendulum by some mischievous spider.	14	3,15	
3			16	3,44	Mostly cloudy weather, peculiar to the S.W. Monsoon.
4			20	2,95	
5			26	3,45	
7	—0,60		29	3,80	
8	—0,85		30	3,20	
9	—1,73		July 3	2,65	
11	+0,26		8	2,50	
12	+0,67		9	2,46	
13	+0,26		10	2,97	
14	—2,79		11	2,73	
15	2,22		13	3,29	
16	1,25		14	3,55	
17	1,50		15	4,36	

Digitized by Google

1837.	Daily Rate.	REMARKS.	1837.	Daily Rate.	REMARKS.
	s.			s.	
July 16	—4,41		Oct. 12	—1,04	
19	4,59		13	0,86	
20	4,65	Continued cloudy weather.	14	0,56	
Aug. 2	1,50		15	0,08	
8	1,56		16	1,29	The seconds hand tript in winding.
9	1,63		17		
10	1,16		23	1,54	
11	1,54		24	1,61	
12	1,50		25	1,60	Continued cloudy weather.
13	1,65		Nov. 6	1,41	
20		Continued cloudy weather.	7	1,51	
21	2,31		8		
22	1,33		12	1,03	The seconds hand went backwards in winding.
23	0,58		17		
27	2,34		21	1,71	
28	1,43		24	3,40	
29	0,65		26	3,85	
30	0,44		27	2,90	
Sep. 14	2,75		28	2,27	
15	2,60		29	2,56	
16	2,09		Dec. 15	2,09	
17	1,77		16	2,39	
18	1,40		17	2,20	
19	1,78		18	2,54	
20	1,76		19	2,79	
21	1,78		20	2,57	
22	1,71		21	2,30	
23	1,88		24	4,08	
24	1,38		25	2,85	
25	1,87		26	2,57	
26	1,01		27	2,91	
27	1,51		28	2,55	
28	0,96		29	3,19	
Oct. 10	1,22				

METEOROLOGICAL INSTRUMENTS EMPLOYED.

The Barometer employed at the commencement of 1836 and up to the end of October of that year, was a Standard (No. 6.) by Gilbert, which, as has been explained in Vol. III., I had been allowed to select from several, which were supplied to the Surveyor General's Department at Calcutta; the diameter of the tube was 0,22 inches, and the zero correction—0,006 inches; rendering necessary to the registered observations, the correction for temperature +0,051 —0,006; or, where in the table of refractions allowance is made for

Digitized by Google

the temperature of the quicksilver,—the correction +,045 is simply necessary.—— The thermometers employed during this period were, a Standard by Troughton (which when in England I had carefully compared with the Royal Society's Standard), and one by Jones, which agreed to identity with it; the former being employed outside, and the other inside the building. During the Storm on the 31st October, neither of these Iustruments escaped destruction, so that I had now no remedy left, but that of filling a tube;—accordingly I availed myself of two unbroken glass tubes and cisterns, and the brass scales of the barometers hitherto employed, and set to work as follows; the quicksilver was purified by repeated washings in diluted nitric acid, and was then heated to a temperature little short of boiling water to drive off moisture: the tube was now heated—the hot mercury gradually poured in, and a small air bubble sent up in the usual way to collect stray bubbles:—after filling two tubes in this way with as much care as it was possible to bestow, finding that a difference of less than one hundredth of an inch existed between them, I concluded, that with the exception of finding the specific gravity of the mercury; all that was necessary to ensure a good barometer and accurate results, had been done; accordingly on the 11th December 1836 I commenced to employ one of these barometers, making an allowance of +0,051 for capilliary action (corresponding to a bore of 0,22 inches). In the interim between 1st November and this date, a barometer by *Tagliabue* was employed, whose correction *then* appeared to be 0,002 inches subtractive.

The Storm had passed away, and its effects had been forgotten in the busy mornings and evenings of the fine months of January and February, and, with the exception of an occasional glance at the two barometers and a feeling of pleasure at their coincidence—no further thought of them was given until the 10th of May: On this day to oblige a friend I had undertaken, after purifying the mercury in his barometer,—to *boil it in the tube;* (a precaution I had feared to undertake with my own, having no spare tubes): On comparing the barometer thus constructed with the two "Standards"; to my utter astonishment, a correction 0,125 inches additive to both of mine, appeared necessary;—at first I felt convinced that the error lay with the newly constructed barometer, but *after boiling the mercury in the tubes* of the two hitherto *supposed* Standards, they both exhibited increased readings to the above amount—Since this time I have frequently filled barometer tubes, and have found a coincidence between them and the *now* considered "Standards" which leaves me confident of not being above 0,01 inches in error. To ascertain at

Digitized by Google

what date this correction ought to commence, or if its progress had been gradual, I compared the meteorological observations of November 1836 with those of former years* when it was at once evident that the correction was due to all observations since the storm. Hence, in the observations of November 1836, and up to 10th May 1837 the correction +,125 is necessary for zero error, and +,051 for capilliary action, and for subsequent observations, the latter correction only should be employed.

The Thermometers employed since the Storm, are two by Bate, of an ordinary description, which at my request had been sent out to this country for rough purposes by the Honorable Court of Directors: I took the precaution on receiving them (which was a few days before the Storm) to note their difference (at 75°) from the Standard hitherto in use, when neither of them differed more than two tenths of a degree: with this testimony of their accuracy, there need be no fear of their errors at any point in the scale being of importance.

OF THE MURAL CIRCLE.

This Instrument having been minutely described in Vol. I., it is only necessary here to state, that the focal length of the telescope is 49 inches, with a clear apperture of 3¾ inches; and that the diameter of the circle is four feet:—The divisions are beautifully cut on a slip of gold (let in upon the circumference of the wheel) to every 5 minutes, and the sub-division of these is effected by four Microscopes situated at 90°.apart, viz. two horizontally and two vertically: the readings of each microscope are registered to a tenth of a second, but the error of making a single bisection at either microscope, arising from *false light* principally, may in some cases amount to 1″,5 but *generally*, I think that the half of this may be stated to be the probable mean error of reading of each microscope.

* The regularity of the barometer in inter-tripical climates will permit this mode of procedure, whereas in a high Latitude; *one*, or even *two* tenths of an inch might be lost sight of in the varied amount of atmospheric pressure which is experienced.

Digitized by Google

The eye piece is supplied with five vertical and one horizontal fixed wires, and one horizontal moveable wire;—the power employed for astronomical observations is about 120, and for the observation of the collimation, about 70—The stability of the Instrument is equal to any thing that could be desired, a fact, which is well attested, from the circumstance that during the last 4 years I have not had occasion to adjust it either for level or azimuth—and a late examination of the axis, enables me to speak with confidence of its being now after 7 years use, in as good a condition as when it was first erected.

OBSERVATIONS MADE WITH THE MURAL CIRCLE.

In the years 1836 and 1837 the Mural Circle has continued to be employed as heretofore—in the measurement of North Polar Distance—taking the mean of the four microscopes at each observation. In the Computation of the Index Error, I have employed the *Madras Catalogue* published in Vol. II., giving always a preference to those stars which differed the least from the Greenwich Catalogue, and restricting the limit of observations for this purpose to within 20° of the zenith; by this arrangement, the anomaly which has been shewn to exist in the Cambridge Mural Circle (depending probably upon flexure of the horizontal wire)—would here necessarily have but a very trifling effect upon the *Index Error;* to discover its amount when the telescope was directed to the horizon,—in the year 1835 I availed myself of a plan which has already been described in Vol. III., thus—" I directed the Circle Telescope to the North horizon and opposite to it, (in the window sill of the observatory) placed a 46-inch telescope by Dolland, with its object glass presented to that of the circle telescope, and its whole length disposed in a right line with it;—turning the circle through 180° to the South Lorizon, I, in a similar way disposed another telescope (Dolland's 5 feet): into the focus of the 46 telescope I had fitted a pair of cross lines, and the 5 feet telescope was supplied with a double wire micrometer: matters thus arranged, I took out the circle eye piece and slide, and unscrewed the object glass, leaving a clear aperture of two inches through the circle telescope, by which means, with

Digitized by Google

the assistance of the micrometer wire, I was unable to adjust the line of collimation of the 5 feet telescope to parallelism with that of the 46-inch placed in the opposite window; this done, I replaced the eye piece, screwed in the object glass, and immediately measured the angular distance between the telescopes; to guard against movement of the telescopes, the observation was not considered complete, till the object glass of the circle telescope had again been removed, and the parallelism of the two other telescopes again examined; but the telescopes having been very securely fixed, no movement whatever was detected during the time of making the observations (about three hours".)

The result of several measurements in this way shewed that the angular distance between the two marks was,— reckoning from the South horizon in the direction through the *Nadir** = 180° 0′ 0″,38 exhibiting a negative flexure to the amount 0″,19. Whether this remained constant or no during the early part of 1836, I have now no means of ascertaining; but on the 27th August, some rain having leaked through the roof, broken the wires, and wetted the inside of the object glass; I availed myself of the necessity of taking out the object glass, to repeat the above experiment. Having put in a new set of silk lines;—from the mean of 5 separate measurements; the angle between the South Telescope through the Nadir up to the North Telescope, was 179° 59′ 58″,88: exhibiting a positive flexure of 0″,56 when directed to the horizon:—Since this period no further observation to this end have been made, which has arisen from a desire of not interrupting the observations, and from a fear of accident in taking out the object glass;—enough however has been done, to shew, that the reduction of the observations by using a common Index Error, entails a very trifling amount of error upon the Madras Results. In addition to the Index Error computed from the observed places of known stars, the observations with the Reflecting Collimator have continued to be made three or four times every day; viz. at 0, 6, 12 and 18 hours; by this means a severe check has always been kept upon the Index Error by the stars, and a very accurate knowledge of the difference between the one method and the other determined, of which I have now some idea of availing myself, by giving up the observation of known stars altogether.

* Erroneously stated *per zen* in Vol. III.

Digitized by Google

Date.	No. of observations.	Index Error by Stars.	REMARKS.	No. of observations	Index Error by Reflecting Collimator.	Difference.
1836.		′ ″			′ ″	
Jan. 1	6	−2 11,26				
2				5	−2 9,51	
3	7	10,13		5	9,77	−0,36
4	2	9,22		5	10,42	+1,20
5			I took out the axis—cleaned	5	9,58	
6	10	17,26	it, and applied fresh oil.	2	17,09	−0,26
7				2	16,91	
8	6	14,31		5	16,83	+2,52
9	9	12,89		5	15,39	
10				3	12,58	−0,31
11	6	12,48	Mean = 2′ 12″,78	3	11,96	−0,52
12						
13	8	12,83		4	11,85	−0,98
14	7	12,91		4	12,69	−0,22
15	9	11,56		4	11,60	+0,13
16				4	11,78	
17	10	10,55		4	11,60	+1,20
18				4	11,90	
19	7	10,01		4	11,31	+1,30
20	7	8,91		3	10,68	+1,77
21	6	9,02		2	8,65	−0,27
22				3	8,85	
23	10	9,19		4	9,05	+0,08
24			Mean = 2′ 9″,24	3	9,50	
25	9	9,28		5	9,23	−0,05
26	5	9,34		4	9,21	−0,13
27	8	9,68		4	9,68	0,00
28	7	10,11		4	9,91	−0,20
29	7	10,16		3	10,20	+0,04
30	7	9,88		3	10,56	+0,68
31	5	10,17		5	9,93	−0,24
Feb. 1	11	9,54		3	10,75	+1,21
2	8	10,29		4	9,46	−0,83
3	7	9,97	Mean = 2′ 10″,01	4	10,62	+0,65
4	6	9,91		4	8,03	−1,88
5	7	9,98		4	9,09	−0,89
6	4	10,42		2	10,45	+0,03
7	9	9,85		4	10,45	+0,60
8	5	10,24		4	9,40	−0,84
9	5	9,59		5	9,01	−0,58
10	7	9,28		4	9,00	−0,28
11	4	8,54		4	8,32	−0,22
12	5	8,59		5	8,79	+0,20
13	5	7,98	Mean = 2′ 8″,55	5	8,11	+0,13
14	6	8,54		5	7,50	−1,04
15	5	8,39		4	8,12	−0,27
16	8	5,36		4	4,40	−0,96
17	5	5,66		4	4,81	−0,85
18	7	6,07	Mean = 2′ 5″,75	5	4,38	−1,69
19	9	5,95		4	5,60	−0,35
20				3	6,60	

Digitized by Google

Date.		No. of observations.	Index Error by Stars.	REMARKS.	No. of observations.	Index Error by Reflecting Collimator.	Difference.
1836.			′ ″			′ ″	
Feb.	21	6	—2 6,43		5	—2 6,00	—0,43
	22	6	6,97		5	5,87	—1,10
	23	} 7	} 7,62		4	5,98	} —1,69
	24				4	5,89	
	25	6	7,78		5	5,06	—2,72
	26	7	6,95		5	5,96	—0,99
	27	9	6,29		5	6,27	—0,02
	28				5	5,47	
	29	5	6,77		5	5,84	—0,93
March	1	} 7	} 7,17		5	6,12	} —0,86
	2				5	6,50	
	3	} 5	} 7,59		5	5,38	} —1,79
	4				4	6,22	
	5	5	6,62		4	6,66	+0,04
	6	5	7,33		5	5,56	—1,77
	7	} 5	} 7,12		3	5,12	} —2,02
	8				4	5,08	
	9	} 9	} 7,11		2	4,65	} —2,17
	10				5	5,23	
	11	6	7,88		3	4,24	—3,64
	12	6	6,89		5	5,00	—1,89
	13	} 9	} 7,06		4	5,10	} —1,99
	14				4	5,05	
	15	} 9	} 6,72		4	5,50	} —0,96
	16				4	6,02	
	17	7	6,96		4	4,72	—2,24
	18	7	6,68		3	4,73	—1,95
	19	6	7,02		4	5,04	—1,98
	20	6	6,71		5	4,75	—1,96
	21	6	6,73		4	4,76	—1,97
				Mean = 2′ 7″,04			
	22	5	5,97		5	4,51	—1,46
	23	5	6,27		3	4,32	—1,95
	24				3	3,37	
	25	6	5,73		3	4,66	—1,07
	26	6	6,16		5	4,82	—1,34
	27	6	6,00		3	4,33	—1,67
	28	5	6,98		4	5,03	—1,95
	29	5	5,58		2	3,92	—1,66
	30	5	6,24		5	5,71	—0,53
	31	7	6,50		2	5,08	—1,42
April	1	7	6,19		4	5,54	—0,65
	2	6	5,71		5	6,39	+0,68
	3	7	6,65		3	6,74	+0,09
	4				4	5,71	
	5	7	5,62		5	5,94	+0,32
	6	} 6	} 6,35		4	4,72	} —2,05
	7				2	3 89	
	8	5	6,44		4	4,71	—1,73
	9				4	3,85	
	10	6	6,02		4	3,77	—2,25

Digitized by Google

Date.	No. of observations.	Index Error by Stars.	REMARKS.	No. of observations.	Index Error by Reflecting Collimator.	Difference.
1836.		′ ″			′ ″	
April 11	10	−2 6,04		4	−2 4,44	−1,81
12				4	4,02	
13	5	5,18		3	3,83	−1,35
			Mean = 2′ 6″,09			
14	7	1,69		5	2,16	+0,47
15	5	1.82		5	0,72	−1,10
16	7	1,76		4	0,23	−1,53
17	8	1,85		5	1,79	−0,06
18				4	1 59 36	
19	8	2,76		5	1 59,86	−2,85
20				3	2 0,50	
21				2	2 2,09	
22	6	2,13		4	0,33	
23				5	0.12	−2.01
24	5	1,51		5	0,50	−1,01
25	5	1,89		3	0,37	−1,76
26				4	1 59.90	
27	6	1,39		3	1 59,55	−1,53
28				4	2 0,17	
29	5	0,58		5	0,34	−0,21
30				5	0,40	
May 1				4	0,21	
2	5	1,50		3	1 59,73	−1,77
			Mean = 2′ 1″,72			
3				3	2 0,22	
4				4	2 0,44	
5	10	0,88		4	1 58,87	−1,45
6				3	1 58.91	
7				4	1 59.60	
8				5	2 0.38	
9	9	2,27		6	0,42	−1,64
10				4	1,60	
11				5	0,12	
12				3	0,02	
13				3	0,27	
14				2	0,96	
15				4	1,28	
16	9	2,21		3	2 0,20	−1,73
17				4	1 59,97	
18	8	1,06		4	2 0,25	−0,83
19				5	2 0,21	
20	7	1,75		4	2 0,08	−1,87
21				2	1 59,68	
22				4	2 0,53	
23	8	1,86		4	0,13	−1,52
24				3	0.36	
25				4	0,37	
26				3	1,14	
27	7	0,90		2	0.15	−0,49
28				3	0,16	
29				3	0,21	

Date.		No. of observations.	Index Error by Stars.		REMARKS.	No. of observations.	Index Error by Reflecting Collimator.		Difference.
1836.			′	″			′	″	
May	30					2	—2	1,13	
	31					3	1	58.18	
June	1	6	—2	0,80		2	1	58,98	—1,49
	2					3	1	57,71	
	3					3	1	59,56	
	4					3	2	0,30	
	5	7		0,25		3		0,16	—0,16
	6					3		0,03	
	7					2	1	59,99	
	8	6	2	0,20		4	2	0,16	—0,04
	9	6	1	59,72		3	1	59,94	+0,22
	10	6	2	0,74		2	2	1,18	+0,44
	11	6	2	0,15		3	1	59,13	—1,02
	12	7	1	59,25		3		58,72	—0,53
	13	7	1	58,52		3		58,63	+0,11
	14	8		59,24		3		58,17	—2,01
	15					3		56,30	
	16	9		59,19		3		57,64	—1,73
	17					4		57,28	
	18	7		59,20		3		57,87	—0,94
	19					4		58,65	
	20					4		57,49	
	21					3		57,07	
	22					3		57,44	
	23					2		58,81	
	24	8	1	58,94		2		58,36	—1,01
	25					3		58,07	
	26					3		58,12	
	27					2		58,23	
	28					3		57,76	
	29					3		58,18	
	30					4		58,87	
July	1	7		59,70		4		59,43	—0,61
	2					3		59,89	
	3								
	4					2		60,37	
	5					2		59,50	
	6	8		58,82		1		59,30	+0,82
	7					2		59,74	
	8					2		59,86	
	9					2		59,04	
	10					3		59,26	
	11					3		60,29	
	12	8		59,58		3		59,90	+0,12
	13					3		59,13	
	14					4		59,93	
	15	10		59,25		5		60,19	+0,17
	16					3		58,64	
	17	6	1	59,33		3		57,87	—1,46
	18	7	2	0,01		4		58,79	—1,22
	19	6	1	59,64		2		59,51	—0,13

Digitized by Google

Date.	No. of observations.	Index Error by Stars.	REMARKS.	No. of observations.	Index Error by Reflecting Collimator.	Difference.
1836.		′ ″			′ ″	
July 20				4	—1 60,61	
21				2	60,64	
22				2	60,23	
23				3	58.67	
24	7	—2 0,30		2	59,82	—0,55
25				2	59,27	
26				4	60,78	
27	7	1 58,84	Continued cloudy weather peculiar to the S. W. Monsoon.	2	59,06	+0,51
28				4	59,64	
29				1	59,15	
30				3	59,90	
31				3	59,11	
Aug. 1				2	59,26	
2				3	60,09	
3				2	59,39	
4				3	59,69	
5				2	59,95	
6				1	59.72	
7				3	59.47	
8				3	59,79	
9				3	60,08	
10				3	59,45	
11						
12				2	59,26	
13	8	58,36		2	59,39	+0,36
14				2	58,70	
15				3	58,61	
16				3	56,89	
17				1	57,33	
18				3	58,83	
19				2	58,22	
20				2	58,35	
21				2	57,39	
22	9	1 58,61		2	56,87	—0,16
23				4	57,19	
24				2	56.92	
25				2	57,13	
26				3	57,75	
27				1	57,75	
			A few drops of rain had leaked through the roof and broken the wires;—I put in a new set.			
Sep. 8	5	—0 45,15		3	—0 46,90	+1,99
9				4	47,38	
10	5	46,23		5	45,73	—0,50
11	7	45,98		4	44,15	—1,83
12	6	44,91		5	44,61	—0,30
13	5	46,16		4	46,81	+0,65
14	6	47,26		4	45,95	—1,31

Digitized by Google

Date.		No. of observations.	Index Error by Stars.	REMARKS.	No. of observations.	Index Error by Reflecting Collimator.	Difference.
1836.			′ ″			′ ″	
Sep.	15	5	—0 46,11		3	—0 47,49	+1,38
	16	5	45,20		4	46,65	+1,45
	17				3	45,66	
	18				4	46,79	
	19	5	46,51		3	47,18	+0,67
	20	} 4	45,85		3	44,62	} —0,97
	21				3	45,13	
	22	5	46,12		3	46,32	+0,20
	23	5	46,27		5	46,15	—0,12
	24				3	46,53	
	25	} 7	45,53		3	46,61	} +1,25
	26				3	46,95	
	27				3	45,23	
	28				4	46,48	
	29	} 6	47,64		3	46,84	} —0,74
	30				5	46,96	
Oct.	1	5	47,07		5	48,00	+0,93
	2	5	47,64		4	47,27	—0,37
	3	5	46,22		4	46,09	—0,13
	4				3	47,15	
	5				3	45,71	
	6	5	46,68		4	46,90	+0,22
	7	6	46,49		4	46,92	+0,43
	8	6	45,98		5	46,85	+0,87
	9	6	45.83		4	46,63	+0,80
	10	6	45,72		5	47,16	+1,44
	11	5	45,94		4	47,32	+1,38
	12	6	45,96		4	45,74	—0,22
	13	6	45,41		5	46,42	+1,01
	14	5	46,07		5	45,06	—1,01
	15	5	47,27		4	46,42	—0,85
	16	5	47,81		3	45,93	—1,88
	17	6	47,35		4	45,50	—1,85
	18	6	47,25		4	45,65	—1,60
	19	5	46,86		4	44,88	—1,98
	20	4	47,19		2	45,92	—1,27
	21	5	46,30		4	46.23	—0,07
	22	6	46,47		5	45,32	—1,15
	23	} 5	46,15		3	45,62	} —1,00
	24				3	45,40	
	25				4	44,44	
	26				2	44,01	
	27	} 5	45,81		4	43,72	} —1,48
	28				4	44.94	
	29				2	43,97	
	30			The violence of the wind, prevented observation.			
	31						
Nov.	1	5	44,76		3	42,74	—2,02
	2	} 5	44,36		2	43,83	} —0,51
	3				2	43.86	
	4	4	43,02		3	44,05	+1,03

Digitized by Google

Date.	No. of observations.	Index Error by Stars.	REMARKS.	No. of observations.	Index Error by Reflecting Collimator.	Difference.
1836.		′ ″			′ ″	
Nov. 5	5	—0 43,46		3	—0 43,52	+0,06
6	6	44,58		4	44,03	—0,55
7	6	44,70		5	43,99	—0,71
8	6	43,25		3	42,98	—0,27
9	5	44,64		4	42,73	—1,91
10	7	43,96		5	43,89	—0,07
11	5	43,86		5	44,27	+0,41
12	6	44,21		4	44,56	+0,35
13				4	43,96	
14				2	43,83	
15				2	42,10	
16				3	43,61	
17	5	43,67		4	43,57	—0,10
18				2	44,03	
19				2	45,28	
23	5	40,38		3	39,49	—0,89
24 }	7	41,85		2	39,76	—1,12
25 }				4	41,70	
26	6	42,56		4	42,40	—0,16
27	5	43,35		4	42,46	—0,89
28	6	42,41		4	40,90	—1,51
29				2	41,57	
30				3	41,82	
Dec. 1	6	41,71		5	40,72	—0,99
2	6	42,00		5	41,53	—0,47
3	6	41,68		5	39,55	—2,13
4	4	41,65		2	39,96	—1,69
5	7	43,84		5	39,92	—3,92
6	6	43,47		3	40,32	—3,15
7 }	6	42,04		2	41,27	—0,65
8 }				2	40,93	
9 }				3	41,41	
10 }				5	41,96	
11	7	42,35		5	42,38	+0,03
12	6	42,88		4	42,38	—0,50
13				3	42,77	
14 }	9	42,55		3	42,07	—0,20
15 }				3	41,46	
16 }				2	42,66	
17 }				5	43,20	
18	6	43,56		2	42,33	—1,23
19 }	9	43,21		2	42,93	—0,22
20 }				4	43,05	
21 }	6	42,95		4	42,82	—0,18
22 }				3	42,71	
23	4	42,24		4	42,50	+0,26
24	5	42,55		4	42,72	+0,17
25				2	43,21	

Digitized by Google

Date.		No. of observations.	Index Error by Stars.	REMARKS.	No. of observations.	Index Error by Reflecting Collimator.	Difference.
			′ ″			′ ″	
1836.							
Dec.	26	9 (26–31)	—0 42,87 (26–31)		5	—0 42,72	—0,43 (26–31)
	27				2	42,37	
	28				3	41,91	
	29				3	42,94	
	30				2	42,80	
	31				5	41,93	
1837.							
Jan.	1				1	42,15	
	2	5	42,80		5	42,20	—0,60
	3	8 (3–4)	44,01 (3–4)		4	42,55	—1,61 (3–4)
	4				5	42,25	
	5	5	44,22		5	42,28	—1,94
	6	5	44,00		4	43,27	—0,73
	7	5	44,28		5	43,81	—0,47
	8	6	43,89		5	43,47	—0,42
	9	8	44,44		5	42,97	—1,47
	10	6	43,26		3	42,49	—0,77
	11	6	42,80		5	42,77	—0,03
	12	7	43,46		4	41,75	—1,71
	13	8 (13–16)	43,36 (13–16)		2	42,95	—1,60 (13–16)
	14				2	41,88	
	15				2	41,65	
	16				3	40,57	
	17	6	44,07		3	40,37	—3,70
	18	5	43,57		4	41,37	—2,20
	19	6	43,62		4	40,37	—3,25
	20	5	43,51		5	41,06	—2,45
	21	4	43,93		2	41,49	—2,44
	22	6	44,07		3	41,14	—2,93
	23	6	44,02		3	41,07	—2,95
	24	7	43,79		3	42,72	—1,07
	25	6	42,75		4	42,26	—0.49
	26	7	43,81		3	42,59	—1,22
	27	7	43,93		3	43,22	—0 71
	28	5	43,58		4	42,96	—0.62
	29	6	44,39		4	43,02	—1,37
	30	8 (30–31)	43,96 (30–31)		3	43,14	—0,93 (30–31)
	31				2	42,91	
Feb.	1	7	43,75		2	44,39	+0,64
	2				4	43,61	
	3	6	43,63		3	44,27	+0.64
	4	7	43,65		2	42,30	—1,35
	5	8	43,41		3	42,66	—0,75
	6	11	43,63		3	43.41	—0,22
	7	5	43.82		4	41,71	—2,11
	8	8	44,06		3	41,72	—2,34
	9	7	44,36		3	42,25	—2,11
	10	6	43.65		3	41,78	—1,87
	11	6	44,22		4	42.09	—2,13
	12	6	43,18		5	41,92	—1,26
	13	6	43,33		5	42,81	—0,52

Digitized by Google

Date.		No. of observations.	Index Error by Stars.	Remarks.	No. of observations.	Index Error by Reflecting Collimator.	Difference.
1837.			′ ″			′ ″	
Feb.	14	6	—0 43,32		5	—0 43,07	—0,25
	15	5	43,37		4	42,17	—0,60
	16	8	44,41		3	43,00	—1,62
	17				4	42,58	
	18	6	44,06		4	42,11	—1,95
	19	5	44,13		3	42,76	—1,37
	20	7	43,87		2	42,58	—1,18
	21				3	42,80	
	22			Mean—43″,83			
	23			I took out the axis;—cleaned it—applied fresh oil, and adjusted the microscopes.			
	24						
	25						
	26	5	41,17		3	41,82	+0,65
	27	6	41,23		3	41,18	—0,05
	28	5	41,19		3	40,38	—0,81
March	1				4	40,81	
	2				4	43,00	
	3				4	43,44	
	4	8	41,15		5	39,78	—1,23
	5			Mean—41″,18	5	40,06	
	6	8	40,42		4	39,58	—0,84
	7	6	40,02		4	41,93	+1,91
	8	6	39,61		4	40,54	+0,93
	9	6	39,94		5	40,25	+0,31
	10	6	39,24		5	40,66	+1,42
	11	7	39,08		5	40,62	+1,54
	12	5	39,64		5	40,44	+0,80
	13	9	39,70		3	40,06	+0,50
	14				4	40,33	
	15	9	39,52		4	40,15	+0,63
	16	9	40,07		4	39,46	—0,62
	17	7	40,08		5	39,25	—0,83
	18	8	40,60		5	39,78	—0,82
	19	8	40,39		6	39,68	—0,71
	20	8	40,59		3	39,29	—1,30
	21	5	40,50		3	39,19	—1,31
	22	8	39,86		4	39,30	—0,56
	23	6	39,58		2	39,58	0,00
	24	7	40,12		3	39,27	—0,65
	25				3	39,67	
	26	9	40,48		4	40,14	—0,59
	27				4	39,66	
	28	6	40,82		4	40,24	—0,48
	29				2	40,44	
	30	7	40,16		2	40,75	+0,26
	31				2	40,08	
April	1			Mean—40″,44	4	38,64	
	2	7	39,03		4	38,97	—0,26
	3				4	38,70	
	4	7	40,38		4	38,78	—1,71
	5				4	38,56	

Digitized by Google

Date.		No. of observations.	Index Error by Stars.	REMARKS.	No. of observations.	Index Error by Reflecting Collimator.	Difference.
1837.			′ ″			′ ″	
April	6	6	—0 38,75		4	—0 39,07	—0,07
	7				4	38,30	
	8	5	37,58		2	37,15	+0,07
	9				2	37,48	
	10				4	38,32	
	11	8	37,75		5	37,62	—0,13
	12	10	37,84		4	38,95	+0,69
	13				4	38,10	
	14	9	37,58		3	37,82	+0,25
	15				2	37,76	
	16				2	37,90	
	17	—	——		4	38,37	
	18	6	36,81		4	38,26	+1,45
	19	6	37,09		4	37,72	+0,63
	20	6	37,06		3	37,65	+0,59
	21	6	38,19		3	38,12	—0,07
	22	5	38,88		5	37,35	—1,53
	23	8	38,07		5	37,69	—0,38
	24	9	38,04		5	38,43	+0,05
	25				5	37,76	
	26	6	37,01		5	38,01	+1,00
	27	8	38,73		4	37,53	—1,48
	28				3	36,97	
			——	Mean — 37″,36			
	29				3	37,64	
	30				2	38,50	
May	1	8	38,54		4	37,73	—0,81
	2	10	39,99		3	38,07	—2,29
	3				5	37,33	
	4	7	38,19		5	37,78	—0,89
	5				4	36,82	
	6				4	36,56	
	7	8	38,00		2	37,26	—0,50
	8				3	37,47	
	9				4	37,76	
	10	6	37,63		3	37,45	—0,18
			——	Mean — 38″,47			
	11	8	37,08		3	37,55	+0,53
	12				3	37,67	
	13				4	37,13	
	14	7	37,98		3	38,10	—0,11
	15				3	37,65	
	16	8	38,39		4	37,33	—0,90
	17				4	37,65	
	18				4	37,49	
	19				4	36,87	
	20				4	37,81	
	21				4	38,23	
	22				4	37,78	
	23	8	37,03		4	38,12	+1,17
	24				2	38,28	

Digitized by Google

Date.		No. of observations.	Index Error by Stars.	REMARKS.	No. of observations.	Index Error by Reflecting Collimator.	Difference.
1837.			′ ″			′ ″	
May	25				2	—0 38,14	
	26				2	37,82	
	27				2	37,65	
	28	8	—0 37,70		2	37,95	+0,17
	29				2	38,02	
			———	Mean — 37″,63			
	30	7	36,69		3	38,73	+1,84
	31				3	38,34	
June	1				2	38,28	
	2				2	38,26	
	3				2	37,07	
	4				2	37,72	
	5	6	36,66		2	37,49	+0,83
	6	6	36,85		3	37,10	+0,25
	7	5	36,07		3	37,46	+1,39
	8	5	35,75		3	37,46	+1,71
	9	5	35,90		3	37,69	+1,79
	10	5	37,37		2	37,37	0,00
	11	8	36,53		3	37,66	+1,13
	12	4	36,92		3	37,67	+0,75
	13				2	38,01	
	14	5	36,16		2	37,36	+1,20
			———	Mean — 36″,49			
	15	8	36,58		3	37,02	+0,36
	16				2	36,86	
	17		——		2	37,10	
	18		——		2	37,43	
	19		——		2	37,36	
	20		——		2	36,12	
	21	6	35,96		3	35,65	+0,03
	22				3	36,33	
	23	4	36,31		3	36,24	—0,07
	24	6	34,95		3	36,01	+1,06
	25	7	36,68		3	36,44	—0,24
	26	6	36,95		3	35,30	—1,65
	27				3	35,82	
	28	7	36,60		2	36,62	—0,12
	29				2	36,71	
	30				2	36,78	
July	1				3	36,82	
	2				2	36,65	
	3	7	35,74		4	37,03	+1,29
	4				2	37,20	
	5				2	37,13	
	6				3	35,88	
	7				2	35,61	
	8	7	35,33		3	35,38	+0,05
	9	7	36,14		3	35,30	—0,84
			———	Mean — 36″,12			
	10				4	35,47	
	11		35,52		5	36,41	+0,89

Digitized by Google

Date.		No. of observations.	Index Error by Stars.	REMARKS.	No. of observations.	Index Error by Reflecting Collimator.	Difference.
1837.			′ ″			′ ″	
July	12				4	—0 35,78	
	13	5	—0 35,95		4	35,45	—0,50
	14	} 10	36,18		3	35,57	} —0,15
	15				4	36,49	
	16	5	36,12		3	36,08	—0,04
	17				3	36,15	
	18				2	35,76	
	19				3	36,34	
	20				3	36,35	
	21				2	36,12	
	22		36,13		2	36,55	+0,42
	23				3	36,38	
	24				2	36,32	
	25				3	35,99	
	26				3	35,78	
	27				3	36,19	
	28				2	36,41	
	29				2	35,80	
	30				2	36,10	
	31				2	36,63	
Aug.	1	}			2	35,66	}
	2				2	36,33	
	3				2	36,62	
	4		37,11		2	35,66	—1,06
	5				2	35,95	
	6				2	36,10	
	7	} 6	36,56		3	36,22	} —0,41
	8				4	36,09	
	9	6	37,42		4	35,59	—1,83
	10	} 9	36,58		4	35,60	} —1,11
	11				3	35,35	
	12	5	37,32		4	35,20	—2,12
	13	}			2	35,00	}
	14				2	33,41	
	15				2	37,42	
	16				2	37,31	
	17	5	38,09		2	36,65	—1,74
	18				2	36,60	
	19				2	36,51	
	20				2	35,93	
	21	} 6	38,50		2	36,20	} —2,03
	22				3	36,75	
	23				2	36,27	
	24	}			2	35,70	}
	25				2	36,06	
	26	8	36,52		2	36,30	—0,10
	27				3	37,61	
	28	6	37,71		3	37,10	—0,61
	29	6	38,04		4	36,46	—1,58

Digitized by Google

Date.		No. of observations.	Index Error by Stars.	REMARKS.	No. of observations	Index Error by Reflecting Collimator.	Difference.
1837.			′ ″			′ ″	
Aug.	30				3	—0 36,13	
	31				2	36.66	
Sep.	1				2	36,71	
	2				2	35,13	
	3	6	—0 38,45		2	35,52	—2,37
	4				2	36,21	
	5				2	36,02	
	6				2	36,27	
	7				2	36,05	
	8				2	36,07	
	9				2	37,10	
	10	12	37,18		2	37,80	+0,10
	11				2	37,49	
	12				3	36,74	
	13	6	38,03		4	36,92	—1,11
	14	6	37,96		4	36,69	—1,27
	15	5	37,81		4	37,09	—0,72
	16	7	38,00		3	36.88	—1,12
	17	6	39,34		3	37,15	—2,19
	18	6	38,73		3	37,16	—1,57
	19	6	37,55		3	36.97	—0,58
	20	6	38,29		4	37,47	—0,82
	21	9	39,29		4	38,73	—0,56
	22	8	38,97		4	39,72	+0,75
	23	5	38,36		4	37,65	—0,71
	24	6	38,45		3	37,85	—0,60
	25	9	38,17		3	38,17	—0,19
	26				3	37,79	
	27	7	37,74		3	38,45	+0,28
	28				3	37,60	
	29				2	37,69	
	30				2	37,62	
Oct.	1			Continued cloudy weather.	2	37,70	
	2				2	37,91	
	3				2	37,76	
	4				2	37.56	
	5				2	37,49	
	6				2	38,40	
	7				2	37,67	
	8				2	37,46	
	9	10	37,67		3	37,66	+0,18
	10				4	38,04	
	11				2	37,81	
	12	6	37,76		4	37,68	—0,08
	13	5	39,05		4	38,11	—0,94
	14	8	38,34		3	37,79	—0,40
	15				3	38,09	
	16	6	38,42		4	38,66	+0,24
	17	8	38,32		3	38,55	+0,27
	18				4	38,63	
	19				2	38,66	

Digitized by Google

Date.		No. of observations.	Index Error by Stars.	Remarks.	No. of observations.	Index Error by Reflecting Collimator.	Difference.
1837.			′ ″			′ ″	
Oct.	20			Continued cloudy weather peculiar to the N. E. Monsoon.	2	—0 37,38	
	21				3	38,41	
	22				2	38,17	
	23	} 7	—0 37,91		4	37,98	} —0,03
	24				3	37,78	
	25	6	37,82		4	37,10	—0,72
	26				2	37,49	
	27				2	38,39	
	28				2	37,99	
	29				1	37 00	
	30				2	37,49	
	31				1	37,23	
Nov.	1				2	37,20	
	2				2	37.38	
	3				2	36,71	
	4				2	35,75	
	5				2	35,23	
	6				1	34,57	
	7	} 5	35,33		1	34,63	} —0,67
	8				2	34,70	
	9				2	34,76	
	10				2	34,32	
	11	} 5	34,46		4	34.97	} +0,21
	12				2	34,37	
	13				4	34,29	
	14	} 9	34,55		3	34,22	} —0,82
	15				3	33,24	
	16				3	34,17	
	17	6	34,21		4	34,41	+0,20
	18	}			2	33,46	}
	19				3	34,38	
	20				3	34,27	
	21	10	34,55		3	34,86	—0,06
	22				3	34,53	
	23				3	34,77	
	24				4	35,17	
	25	} 8	35,15		3	34,46	} —0,69
	26				4	34,47	
	27	8	34,91		4	35,03	+0,12
	28				3	34,53	
	29	}			3	34,93	}
	30	7	35,77		3	34.56	—0,95
Dec.	1				4	34,98	
	2				3	35,12	
	3				3	34,75	
	4				3	35,17	
	5				3	35,26	
	6				2	34.76	
	7				3	34,44	
	8				2	34,21	
	9				3	34 22	

Digitized by Google

Date.	No. of observations.	Index Error by Stars.	REMARKS.	No. of observations.	Index Error by Reflecting Collimator.	Difference.
1837.		′ ″			′ ″	
Dec. 10				2	—0 32,76	
11				3	33,02	
12				3	33,67	
13				3	32,53	
14	5	—0 34,98		3	33,89	—1,09
15 } 16 }	9	35,27		3 2	32,95 33,17	—2,21
17 } 18 }	7	35,13		4 4	33,02 32,91	—2,17
19 } 20 }	9	34,55		3 4	32,91 33,03	—1,58
21 } 22 } 23 }	7	34,37		2 2 4	33,72 32,80 33,74	—0,96
24				1	33,55	
25	5	33,54		3	33,09	—0,45
26	6	34,97		3	33,71	—1,26
27 } 28 }	11	34,77		3 4	33,61 33,56	—1,19
29	7	35,42		3	34,34	—1,08
30 } 31 }		36,17		2 2	36,64 37,20	+0,75

Taking the means of the column "difference", and putting *d* L. for the error of the Assumed Latitude, and E for the error of the four divisions employed, we get

from 260 Observations in	1835	E + *d* L =	— 0″,06
190 ———	1836	=	— 0 ,65
171 ———	1837	=	— 0 ,55
Mean		=	— 0 ,37

The discordance here found between the result for 1835 as compared with that for 1836 and 1837, is, as far as our present knowledge extends, chargeable alone to error of observation: it adds one to a great many other cases of daily occurrence, which shew, that notwithstanding the facility with which an accuracy of one or two seconds may be attained, (even by a single observation) still, how little control continued observation gives us over the fraction of a second.

Digitized by Google

RESULT OF OBSERVATIONS MADE WITH THE TRANSIT INSTRUMENT AND MURAL CIRCLE.

It has hitherto been a constant source of regret to me,—that whilst the observations of the fixed Stars and Planets, have come out—in a manner creditable to the Madras Instruments and Observers—still, that the observations of the Sun have been discordant to a degree little calculated to confer credit upon either. It is not that the *mean results* have differed much at any time, from those determined at other observatories; but the discordance found among individual results reaches to an amount (occasionally 5 or 6 seconds + or —) which could hardly be credited: during the past two years the subject has occupied no small share of my attention, and the result has been I am sorry to say but little satisfactory. During the Autumn of 1835 and in 1836 and 1837, it had generally been my custom, to compute the Sun's N. P. D.—set the instrument, and read off the 4 Microscopes previously to opening the shutters for the meridian observation; the comparison of these readings with those made at the time of meridian passage, shews that no change is ever effected upon the relative position of the miscroscopes by the Sun shining upon the Instrument: to discover if the Index Error remained constant under these circumstances,—I made two or three observations with the Reflecting Collimator at a few minutes before Noon; and then, opening the shutter,—allowed the Sun to shine upon the Instrument for 5 minutes before the meridian passage; immediately after which, the Observation with the Reflecting Collimator was repeated: the result shewed, that no appreciable change had occurred from the action of the Sun's rays upon the Instrument for this time:—under these circumstances I am reluctantly compelled to proceed, and leave this matter still unexplained. In the table which follows, the meridian observations of the Sun at the Transit have it will be observed, on many occasions been omitted, which has arisen in consequence of no known star having been observed during the day time—when the uncertainty of the clock's rate would not permit its error to be interpolated from the evening observations.

Digitized by Google

The observed transit of the 1st and 2d limb over the five wires, furnishes us with the value of the apparent semidiameter; from which, the *mean horizontal semidiameter* $= \left(\frac{\text{Sun's 2 L.} - \text{1 L}}{2}\right) \times 15 \left(1 + \frac{\alpha' - \alpha}{48}\right)$ sin N.P.D. $\times$ dist. (Earth — Sun)

At the Circle it has been usual to observe either the North limb alternately with the South limb at consecutive transits, or to observe on the same day— the N.P.D. of the one limb at 30 seconds *before* the meridian passage, and that of the other at 30 seconds after it—whereby the mean *vertical* semidiameter of the Sun has been computed from the formulæ—

M. V. Semid. $= \frac{\text{N. P. D. Sun's South L.} - \text{N. P. D. Sun's North L.} + dr. \pm d\text{D.} - \text{C} - \text{T.}}{2} \times$ dist. (Sun—Earth.) where α', α, represent the A. R. of the Sun at the noon following, and preceding the day of observation; *dr*, the difference of the refractions due to the N. and S. limbs; *d* D, the change of Declination in 1^m of time (the interval between the observations), C a correction due to a small inclination of the horizontal wire; which, up to the 19th June 1836 amounted to 1″,46 but has since been reduced to 0; and T = 2″,42 is the value of the diameter of the wire.

Comparison of the Observed A. R. and N. P. D. of the Sun, with the places interpolated from the Nautical Almanac.

1837.	Right Ascension from observation.	Right Ascension from N. A.	Error of Tables.	North Polar Distance from observation.	North Polar Distance from N. A.	Error of Tables.	Mean Semidiameter. Horizontal.	Mean Semidiameter. Vertical.
	h. m. s.	s.	″	° ′ ″	″	″	′ ″	
Jan. 2	18 47 45,02	44,60	—0,42	113 0 25,15	28,60	+3,45		
3	52 9,79	9,30	—0,49	112 55 8,28	12,50	+4,22	16 2,01	
4	56 34,21	33,70	—0,51	49 28,38	29,00	+0,62	0,27	
6	19 5 21 47	21,10	—0,37	36 37,82	40,90	+3,08	1,96	
7	9 44,65	44,20	—0,45	29 32,95	36,70	+3,75	1,87	
8	14 7,04	6,90	—0,14	22 5,58	5,70	+0,12	3,72	
9	18 28,92	29,00	+0,08	14 5,82	8,40	+2,58	3,68	
10	22 50,95	50,60	—0,35	5 43,26	44,80	+1,54	2,68	
11	27 12,31	11,80	—0,51	111 56 52,36	55,40	+3,04	15 59,90	
13	35 52,80	52,30	—0,50	37 58,00	59 70	+1,70	59,80	
14	40 11,93	11,80	—0,13	27 50,49	53,90	+3,41	55,96	
15	44	30,40		17 21,46	23,20	+1,74	16 3,58	
16	48 48,91	48,60	—0,31	6 28,03	27,90	—0 13	2,32	
17	53 6,12	5,90	—0,22	110 55 7,89	8 30	+0,41	15 59,66	
18	57 22,85	22 70	—0,15	43 25,71	24,80	—0,91	58,27	
19	20 1 39,05	38,70	—0,35	31 16,97	17,80	+0,83	16 1,18	
20	5 54,20	53,90	—0,30					
21	10 8,85	8,40	—0,45	5 55,61	54,00	—1,61	1,67	
22	14 22,30	22,10	—0,20	109 52 37,44	38 40	+0,96	0,47	

1836.		Right Ascension from observation.	Right Ascension from N. A.	Error of Tables.	North Polar Distance from observation.	North Polar Distance from N. A.	Error of Tables.	Mean Semidiameter. Horizontal.	Mean Semidiameter. Vertical.
		h. m. s.	s.	"	° ′ ″	"	"	′ ″	
Jan.	23	20 18 35,36	35,00	—0,36	109 39 1,40	0,50	—0,90	15 58,70	
	24	22 47,23	47,10	—0,13				16 2,14	
	25	26 58,56	58,40	—0,16	10 34,83	39,30	+4,47	1,10	
	26	31 9,09	8,90	—0,19				0,80	
	27	35 19,22	18.60	—0,62	108 40 54,70	53,90	—0,80	1,96	
	28	39 27,64	27,50	—0,14	25 26,81	30,60	+3,79	1,82	
	29	43 35,76	35,40	—0,36	9 44,31	47,60	+3,29	0,90	
	30	47 43,14	42,60	—0,54	107 53 42,30	45,00	+2,70	15 59,93	
	31	51 49,04	48,90	—0,14				16 2,30	
Feb.	1	55 54,70	54,30	—0,40				2,48	
	2	59 59,35	58,90	—0,45	107 3 46,33	44,80	—1,53	2,16	
	3	21 4 3,31	2,70	—0,61	106 46 26,44	28,30	+1,86	1,50	
	4	8 6,38	5,80	—0,58	28 54,05	54,40	+0.35	0,30	
	5	12 8,81	8,00	—0,81	11 2,81	3,50	+0,69		
	6	16 10,27	9,40	—0,87	105 52 55,22	55,80	+0,58	1,66	
	7	20 10,04	9,90	—0,14	34 33,47	31,70	—1,77	4,30	
	8	24 10,32	9,70	—0.62	15 54,66	51,70	—2,96	1,20	
	9	28 9,47	8,70	—0,77	104 56 58,82	56,20	—2,62	0,68	
	10	32 7,77	7,00	—0,77				0,47	
	11	36 4,72	4,50	—0,22	18 15,55	20,00	+4,45		
	12	40 1,54	1,20	—0,34	103 58 37,19	40,30	+3,11	15 58,98	
	13	43 57,52	57.20	—0,32	38 41,35	46,70	+5,35	59,86	
	14	47 52,40	52,30	—0,10	18 37,35	39,60	+2,25	16 2,28	
	15	51 47,18	46.80	—0,38	102 58 14,93	19,40	+4,47	1,15	
	16	55 41,20	40,50	—0,70	37 42,53	46,70	+4,17	0,06	
	17	59 34,09	33,50	—0.59	16 58,93	1,80	+2,87	15 59,75	
	18	22 3 26,24	25,70	—0,54	101 56 0,78	5,20	+4,42	16 2,17	
	19	7 17,63	17,30	—0,33	34 55,24	57,30	+2,06	1,10	
	20	11 8,67	8,10	—0,57	13 37,89	38,20	+0,31	0,75	
	21	14 58,47	58,40	—0,07	100 52 5,56	9,00	+3,44	3,18	
	22	18 48,41	47,80	—0,61				1,06	
	23	22 36,87	36,60	—0,27					
	24	26 25,28	24,80	—0,48	99 46 39,58	42,60	+3,02	2,90	
	25	30 12,42	12,40	—0,02	24 34,42	35,80	+1,38	0,24	
	26	33 59,81	59,30	—0,51	2 16,49	20,80	+4,31	1,48	
	27	37 46,16	45,60	—0,56	98 39 58,42	57,80	—0.62	1,38	
	28	41 32,06	31,60	—0,46	17 25,31	27,40	+2,09	1,52	
	29	45 17,22	16,80	—0,42	97 54 48,64	49,70	+1,06	1,42	
Mar.	1	49 2,15	1,80	—0,35	32 3,40	5,30	+1.90	2,30	
	2	52 46,02	45,90	—0,12	9 12,18	14,40	+2,22		
	3	56 29,69	29,60	—0,09	96 46 16,18	17,50	+1,32	1,16	
	4	23 0 13,02	12,80	—0,22	23 10,62	15,20	+4,58	1,32	
	5	3 55,67	55.50	—0,17	0 5,74	7,40	+1,66	2,48	
	6	7 37,60	37,90	+0,30	95 36 55,59	54,80	—0,79	3,38	
	7	11 20,16	19,70	—0,46	13 40,00	37,70	—2,30	1,12	
	8	15 1,91	1,30	—0,61	94 50 15,41	16,30	+0,89	2.78	
	9	18 42,63	42,50	—0,13	26 52,79	51,00	—1,79	0,62	
	10	22 23,56	23,40	—0,16	3 21,03	22,30	+1,27	0,67	
	11	26 3,86	4.00	+0,14	93 39 49,34	50,40	+1,06		
	12	29 44,36	44,20	—0,16	16 12,32	15,80	+3,48	2,72	
	13	33 24,33	24,10	—0,23	92 52 38,95	39,10	+0,15	2,45	

Digitized by Google

1836.		Right Ascension from observation	Right Ascension from N. A.	Error of Tables.	North Polar Distance from observation.	North Polar Distance from N. A.	Error of Tables.	Mean Semidiameter. Horizontal.	Mean Semidiameter. Vertical.
		h. m. s.	s.	"	° ' "	"	"	' "	' "
Mar.	14	23 37 4,56	3,90	—0,66	92 28 57,96	0,20	+2,24	16 1,70	15 58,02
	15	40 43,49	43,30	—0,19				1,68	16 2,16
	16	44 22,73	22,50	—0,23	91 41 35,63	38,10	+2,47	0,70	1,80
	17	48 1,66	1,50	—0,16	17 53,09	55,70	+2,61	4,14	1,82
	18	51 40,74	40,30	—0,44	90 54 12,09	12,80	+0,71	2,14	0,64
	19	55 19,27	18,90	—0,37	30 31,33	29,90	—1,43	2,56	0,34
	20	58 57,11	57,50	+0,39	6 46,88	47,40	+0,52		2,94
	21	0 2 35,87	35,80	—0,07				1,42	
	22	6 14,33	14,10	—0,23	89 19 26,96	25,10	—1,86	0,86	
	23	9 52,53	52,20	—0,33	88 55 45,58	46,10	+0,52	1,80	
	24	13 30.13	30,20	+0,07	32 7,26	8,90	+1,64	1,92	
	25	17 8,63	8,20	—0,43	8 31,58	33,90	+2,32	1,86	1,92
	26	20 46,28	46,10	—0,18	87 44 59,28	1,60	+2,32	2,34	5,68
	28	28 2,61	2,00	—0,61	86 58 5,42	6,20	+0,78	2,28	1,80
	29	31 40,04	39,90	—0,14	34 41,78	43,80	+2,02	3,65	
	30	35 18,07	17,90	—0,17	11 24,35	25,50	+1,15	2,05	
	31	38 56,02	55,90	—0,12	85 48 14,09	11,40	—2,69	2,17	
April	1	42 34,32	34,10	—0,22	25 2,72	2,30	—0,42	1,32	
	2	46 12,53	12,30	—0,23	85 1 56,19	57,90	+1,71	1,06	
	3	49 50,90	50,70	—0,20	84 39 1,80	58,90	—2,90	1,37	
	4				16 5,44	5,40	—0,04	3,42	
	5	57 7,57	7,90	+0,33	83 53 13,11	17,70	+4,59	0,82	
	6	1 0 47,01	46,70	—0,31	30 30,82	36,10	+5,28	3,54	
	7	4 25,77	25,90	+0,13	7 57,50	1,00	+3,50	15 59,34	
	8	8 5,59	5,20	—0,39	82 45 27,54	28,90	+1,36		
	9	11 45,03	44,90	—0,13	23 8,94	12,00	+3,06	16 1,92	
	10	15 24,87	24,70	—0,17	0 55,77	58,70	+2,93		
	11	19 5,31	4,90	—0,41	81 38 51,77	53,50	+1,73	1,44	
	12	22 45,55	45,40	—0,15	16 55,56	56,40	+0 84	2,14	2,58
	13	26 26,35	26,10	—0,25	80 55 9,64	7,90	—1,74	0,90	
	14	30 7,41	7,20	—0,21				3,52	
	15	33 49,00	48,70	—0,30	80 12 2,37	57,80	—4,57	3,82	
	16	36 30,48	30,60	+0,12	79 50 41,31	37,20	—4,11	1,24	
	17	41 13,38	12,80	—0,58	29 27,63	26,50	—1,13	2,88	
	18	44 55,39	55,29	—0,10	8 24,31	26,20	+1,89	3,14	
	19	48 38,52	38,30	—0,22	78 47 32,44	36,50	+4,06	1,62	
	20	52 22,09	21,70	—0,39				16 1,20	
	21	56 5,86	5.50	—0,36	6 28,12	31,10	+2,98	0,64	
	22	59 49,95	49,70	—0,25	77 46 14,53	15.80	+1,27	2,94	
	23	2 3 34,84	34,40	—0,44	26 11,17	12,50	+1,33	0,18	
	24	7 19,45	19,50	+0,05	6 20,10	19,90	—0,20	15 58,60	
	25	11 5,65	5,00	—0,65	76 46 41,94	44,10	+2,16	16 3,72	
	26	14 51,63	51,10	—0,53	27 18,05	19,30	+1,25	1,46	0,34
	27	18 38,01	37,40	—0,61	8 6,94	8,10	+1,16	0,84	
	28	22 25,29	24,50	—0,79	75 49 11,80	10,50	—1,30	1,64	3,98
	20	26 12,51	11,70	—0,81	30 26,44	26,90	+0,46	1,52	
	30	30 0,48	0,00	—0,48	12 0,12	57,80	—2,32		
May	1	33 48,65	48,60	—0,05	74 53 44,38	43,10	—1,28	2,10	
	2	37 38,19	37,70	—0,49	35 41,11	43,30	+2,19	1,40	
	3	41 27,29	26,40	—0,89	17 57,39	58,60	+1,21		
	5	49 8,16	8,30	+0,14	73 43 9,71	16,10	+6,39		

Digitized by Google

1836.		Right Ascension		Error of Tables.	North Polar Distance		Error of Tables	Mean Semidiameter.	
		from observation.	from N. A.		from observation.	from N. A.		Horizontal.	Vertical.
		h. m. s.	s.	"	° ′ "	"	"	′ "	′ "
May	6	2 52 59,15	59,60	+0,45	73 26 14,79	18,80	+4,01		15 59,28
	7	56 51,77	51,70	—0,07	9 33,19	37,80	+4.61	16 2,64	57,26
	8	3 0 44,32	44,20	—0,12	72 53 11,53	13,40	+1,87	2,68	
	9				37 1,25	6.10	+4.85	3,28	59,75
	10	8 31,65	31,20	—0,45	21 13,83	16,00	+2,17	2,21	
	11	22 25,48	25,40	—0,08	5 41,78	43,60	+1,82		
	13				71 35 31,09	32,50	+1,41	0,70	
	14				20 55,31	54,60	—0,71	0,86	
	15	28 8,42	8,60	+0,18				0,52	
	16	32 6,23	5,80	—0,43	70 52 31,89	35,30	+3,41	5,40	16 1,64
	17							5,32	
	18	40 1,97	1,90	—0,07				3,56	
	19	44 0,87	0,90	+0,03	12 32,15	32,60	+0,45	6,78	
	20	48 0,18	0,40	+0,22	69 59 55,80	51,80	—4.00	5,96	
	21	52 0,10	0.30	+0,20	47 33,68	31,40	—2,28	5,96	
	22	56 0,84	0.90	+0,06	35 33,21	31 80	—1,41	3,74	1,26
	23	4 0 1,66	1,90	+0,24	23 51,81	53.20	+1,39	4,62	2,82
	24	4 3,51	3,80	+0.29	12 34,03	35,90	+1,87	5,76	0.10
	25	8 5,52	5.40	—0,12	1 35,19	40,00	+4,81	5,58	2,54
	26	12 8,12	7,80	—0,32	68 51 1,85	5,80	+3,95	1,18	
	28	20 14,56	14.30	—0,26	30 58,41	3,10	+4,69	1,40	
	29	24 18,42	18,10	—0,32				2,82	
	30	28 22,89	22,50	—0,39	12 25.59	30,20	+4,61	2,45	0,56
	31	33 27,57	27,30	—0,27	3 44,01	47,30	+3,29	2,70	
June	1	36 33,17	32,60	—0,57	67 55 23,61	27,30	+3,61	1,46	
	4	48 50,84	50,80	—0,04				3,78	
	5	52 57,64	57,50	—0,14				1,94	
	6	57 4,65	4,60	—0,05	67 19 31,42	34,90	+3,48	1,35	
	7	5 1 11,92	11,90	—0,02	13 31,71	35,20	+3,49	1,46	
	8	5 19,69	19,70	+0,01	7 53,48	59,20	+5,72	2,38	1,18
	9	9 27,86	27,60	—0,26	2 45,78	47,30	+1,52	15 59.40	15 58,12
	10	13 36,23	36,00	—0,23	66 58 0,04	59,70	—0,34	16 1,28	
	11	17 44 68	44,60	—0,08	53 35,48	36,30	+0,82		
	12	21 54,05	53,40	—0,65	49 34,49	37,20	+2,71	2,10	16 1,30
	13	26 3,19	2,50	—0,69	46 2,33	2,60	+0,27	2,82	
	15	34 21.04	20,90	—0,14	40 2,00	7,40	+5,40	2,82	
	16	38 30,55	30,40	—0,15	37 45.36	46,80	+0,94	3,60	
	17	42 40,08	39,90	—0,18	35 48,77	50,90	+2,13	2,76	1,32
	18	46 49.66	49.40	—0,26	34 18,84	19,80	+0,96	2,60	
	19	50 58,49	59 00	+0,51	33 11,35	13,50	+2,15	2,02	
	20	55 9,29	8,70	—0,59	32 32.33	32,20	—0,13	2,28	
	21				32 12,88	15,70	+2,82	0,38	3,45
	22				32 21,88	23,90	+2,02	2,22	
	28	6 28 23,74	23,10	—0,64	41 53,58	54,00	+0,42		
	30				48 19,60	20,60	+1,00		3,38
July	1				52 9.97	10,30	+0,33	1.98	
	2	44 56,82	56,40	—0,42	56 23,07	23,40	+0,33	1.98	1,88
	3	46 4,49	4,10	—0,39				4,45	
	4							1.34	
	5				67 11 28,29	30,90	+2,61	0.44	
	6				17 21,20	20,80	—0,40	0 47	

Digitized by Google

1836.	Right Ascension		Error of Tables.	North Polar Distance		Error of Tables.	Mean Semidiameter.	
	from observation.	from N. A.		from observation.	from N. A.		Horizontal.	Vertical.
	h. m. s.	s.	"	° ' "	"	"	' "	' "
July 7				67 23 29,38	34,40	+5,02	16 1,62	
9	7 13 44,69	44,00	—0,69	67 37 11,21	12,20	+0,99	0,92	15 59,95
10	17 49,94	49,40	—0,54	67 44 33,17	36,00	+2,83	15 59,88	58,30
11				67 52 21,46	22,90	+1,44	16 2,18	16 1,75
12				68 0 27,90	32,50	+4,60	0,78	
13				68 9 3,34	5,00	+1,66	3,34	
14	34 7,47	6,80	—0,67	68 17 54,87	59,80	+4,93	1,40	
15	38 10,26	10,00	—0,26	68 27 13,12	16,90	+3,78	2,52	
16	42 13,09	12,70	—0,39	68 36 55,13	56,10	+0,97	1,90	
17	46 15,22	14,80	—0,42	68 46 53,39	57,10	+3,71	2,02	
18				68 57 15,01	19,60	+4,59		
19	54 17,89	17,40	—0,49	69 8 2,44	3,70	+1,26	0,70	
20	58 18,25	17,80	—0,45	69 19 8,42	8,80	+0,38	1,68	
23				69 54 30,55	28,40	—2,15	1,26	1,06
26	8 22 8,02	8,20	+0,18	70 32 48,15	48,70	+0,55	0,72	
27	26 4,95	4,60	—0,35	70 46 18,08	14,40	—3,68	15 57,72	
28	30 0,50	0,20	—0,30	71 0 0,38	59,10	—1,28	16 1,86	15 59,12
30				71 28 23,94	24,50	+0,56	2,18	
Aug. 2				72 13 22,47	18,90	—3,57	1,70	
4							1,64	
9				74 8 4,46	3,10	—1,36	1,30	16 0,88
10				74 25 34,69	30,40	—4,29	0,86	
14				75 37 52,73	47,30	—5,43		
15				75 56 28,58	26,80	—1,78	1,40	15 58,20
16				76 15 19,51	19,70	+0,19	2,40	
17	9 46 32,10	32,00	—0,10	76 34 22,57	25,60	+3,03	0,62	
18	50 15,95	15,70	—0,25	76 53 43,25	44,30	+1,05	1,92	16 0,75
19				77 13 18,33	15,30	—3,03	2,64	
21	10 1 24,21	23,90	—0,31				3,68	
22				78 12 56,01	59,80	+3,79	2,42	
23	8 47,00	46,80	—0,20	78 33 19,40	17,20	—2,20	2,05	
25				79 14 25,41	24,10	—1,31	1,80	
27	23 27,74	27,60	—0,14	79 56 17,95	11,70	—6,25	2,30	
Sep. 7	11 3 22,55	22,40	—0,15				1,28	
8	6 58,69	58,60	—0,09				2,25	
9	10 34,77	34,80	+0,03	84 41 43,17	38,70	—4,47	1,26	
11	17 46,79	46,70	—0,09	85 27 14,99	13,90	—1,09	2,00	
12	21 22,28	22,50	+0,22	85 50 11,29	8,90	—2,39	1,62	15 59,72
16	35 44,70	44,60	—0,10	87 22 31,57	29,00	—2,57	1,64	58,62
17				87 45 41,96	42,40	+0,44		16 0,84
18				88 8 55,10	58,30	+3,20	1,02	
19	46 30,82	30,90	+0,08				15 58,00	
20	50 6,42	6,30	—0,12	88 55 36,69	36,80	+0,11	59,72	1,66
21	53 42,03	41,80	—0,23	89 18 59,54	58,40	—1,14	16 1,38	
22	57 17,44	17,40	—0,04	89 42 24,65	21,60	—3,05	0,98	3,02
23	12 0 53,26	50,03	—0,23				3,52	
24	4 28,85	28,80	—0,05				15 58,60	
25	8 4,59	4,60	+0,01	90 52 32,54	35,20	+2,66	58,20	
26	11 40,99	40,70	—0,29	91 16 2,37	0,00	—2,37	16 0,32	
27				91 39 25,30	24,70	—0,60	15 57,96	
28				92 2 51,39	48,60	—2,79	16 1,98	

Digitized by Google

1836.		Right Ascension from observation.	Right Ascension from N. A.	Error of Tables.	North Polar Distance from observation.	North Polar Distance from N. A.	Error of Tables.	Mean Semidiameter. Horizontal.	Mean Semidiameter. Vertical.
		h. m. s.	s.	"	° ' "	"	"	' "	' "
Sep.	29	12 22 30,75	30,40	—0,35	92 26 12,20	11,60	—0,60	16 0,84	
	30	26 7,30	7,30	0,00				15 59,20	
Oct.	1	29 45,01	44,70	—0,31					
	4	40 38,40	38,40	0,00	94 22 40,39	41,10	+0,71	16 1,30	
	5				94 45 51,21	51,40	+0,19	3,16	
	6	47 56,08	56,10	+0,02	95 9 0,74	58,10	—2,64	1,84	
	7	51 35,55	35,50	—0,05				0,88	
	8	55 15,20	15,40	+0,20	95 55 2,68	0,10	—2,58	0,80	
	9	58 55,83	55,60	—0,23	96 17 54,45	54,50	+0,05	3,32	
	10	13 2 36,57	36,40	—0,17	96 40 45,03	43,80	—1,23	2,92	
	11	6 17,78	17,60	—0,18	97 3 23,18	27,80	+4,62	0,70	
	12	9 59,67	59,30	—0,37	97 26 2,62	6,00	+3,38	1,40	
	13	13 41,89	41,60	—0,29	97 48 36,53	38,00	+1,47	2,16	
	14	17 23,97	24,30	+0,33	98 10 59,48	3,70	+4,22	1,70	
	15	21 7,60	7,60	0,00				3,67	
	16	24 51,73	51,40	—0,33				3,84	
	17							2,92	
	18	32 20,80	20,80	0.00	99 39 33,70	32,40	—1,30	4,72	
	19	36 6,33	6,40	+0,07	100 1 19,10	19,20	+0,10		
	20	39 52,70	52,60	—0,10	100 23 0,87	57,10	—3,77	3,57	
	21	43 39,34	39,30	—0,04	100 44 25,38	25,60	+0,22	2,50	
	22	47 27,01	26,80	—0,21	101 5 44,16	44,30	+0,14	1,92	
	23	51 15,15	14,90	—0,25				15 58,50	
	24				101 47 50,21	51,40	+1,19	16 0,58	
	25	58 53,74	53,20	—0,54	102 8 38,39	39,10	+0,71	2,82	15 59,88
	26				102 29 13,10	15,50	+2,40	0,82	
	28	14 10 26,42	26,20	—0,22					
Nov.	2				104 47 43,31	45,40	+2,09		
	5				105 43 38,11	40,10	+1,99		
	6	45 47,41	47,90	+0,49	106 1 46,61	47,80	+1,19	4,10	
	7	49 48,28	47,80	—0,48	106 19 37,40	39,40	+2,00	6,34	
	8	53 48,66	48,60	—0,06				6,50	
	9	57 50,36	50,20	—0,16	106 54 34,34	32,90	—1,44	4,77	16 1,64
	10	15 1 52,81	52,60	—0,21	107 11 34,52	34,00	—0,52	3,94	0,96
	11	5 56,57	56,00	—0,57				4,66	
	12	10 0,52	0,20	—0,32	107 44 39,18	42,20	+3,02	4,45	
	13				108 0 45,82	48,70	+2,88	3,40	
	22	51 28,00	27,30	—0,70	110 10 48,53	47,70	—0,83	5,62	
	23	55 40,60	40,40	—0,20	110 23 29,13	27,40	—1,73	5,54	
	24							2,32	
	25	16 4 9,13	9,10	—0,03				15 58,70	
	26	8 24,66	24,50	—0,16	110 59 8,64	9,90	+1,26	16 3,48	
	27	12 40,86	40,60	—0,26	111 10 14,52	17,30	+2,78	4,77	
	28	16 57,68	57,60	—0,08	111 21 1,82	0,70	—1,12		
	29	21 15,53	15,20	—0,33	111 31 20,53	20,10	—0,43	2,12	
Dec.	1				111 50 44,48	44,90	+0,42	2,56	
	2	34 12,48	12,20	—0,28	111 59 47,39	50,00	+2,61	8,86	0,80
	4	42 53,42	53,50	+0,08	112 16 43,69	43,30	—0,39	4,00	
	5	47 15,18	15,00	—0,18	112 24 29,91	31,20	+1,29	5,02	15 59,87
	6	51 37,10	37,10	0,00	112 31 51,23	52,90	+1,67	4,76	
	7	55 59,75	59,70	—0,05	112 38 49,79	48,10	—1,69	2,43	

Digitized by Google

1836.	Right Ascension from observation	Right Ascension from N. A.	Error of Tables.	North Polar Distance from observation.	North Polar Distance from N. A.	Error of Tables.	Mean Semidiameter. Horizontal.	Mean Semidiameter. Vertical.
	h. m. s.	s.	″	° ′ ″	″	″	′ ″	′ ″
Dec. 11	17 13 34,99	34,70	—0,29	113 1 57,36	0,30	+2,94	16 5,14	
12	17 59,84	59,50	—0,34	6 38,05	40,00	+1,95	5,12	
13							1,38	
16				20 38,91	41,60	+2,69	5,16	
17	40 7,85	7,60	—0,25	22 57,07	2,00	+4,93	4,85	
19	49 0,82	0,20	—0,62	26 16,19	18,20	+2,01	3,14	
20	53 27,01	26,70	—0,31					
23	18 6 46,87	46,30	—0,57	27 10,92	11,50	+0,58	4,00	16 2,33
24	11 13,87	13,00	—0,37	26 13,43	14,10	+0,67	4,07	0,26
27				20 31,57	32,70	+1,13	4,40	15 59,65
28				17 41,18	42,70	+1,52	4,60	16 0,48
29				14 24,88	24,50	—0,38	2,17	
31	42 15,54	15,60	+0,06	113 6 20,17	24,30	+4,13	3,14	2,54
1837.								
Jan. 2				112 56 29,64	33,10	+3,46	5,17	15 59,44
3	55 30,60	30,50	—0,10	50 55,34	56,30	+0,96	8,18	16 0,37
5	19 4 18,87	18,50	—0,37	38 19,13	20,80	+1,67	7,34	15 57,41
6	8 42,53	41,90	—0,63	31 22,36	22,60	+0,24	6,86	58,15
7	13 5,30	4,80	—0,50	24 1,01	57,60	—3,41	5,85	
8	17 27,68	27,50	—0,18	16 8,08	6,20	—1,88	6,13	
9	21 49,45	49,10	—0,35	7 45,93	48,60	+2,67	3,82	16 1,96
10	26 11,03	10,40	—0,63	111 59 3,92	4,90	+0,98	3,37	15 59,73
11	30 31,52	31,20	—0,32	49 55,77	55,50	—0,27	3,54	16 0,98
12	34 51,76	51,40	—0,36	40 20,05	20,60	+0,55	2,82	15 59,07
13	39 10,09	10,80	—0,19				15 57,40	
15				9 3,41	5,90	+2,49	16 0,52	
16				110 57 52,15	52,00	—0,15	2,16	57,07
17				46 11,47	14,30	+2,83		
18				34 15,28	12,90	—2,38	3,34	
19	20 4 53,92	53,30	—0,62	21 51,43	48,40	—3,03	2,47	
20	9 7,82	7,70	—0,12	9 2,85	1,00	—1,85	15 59,93	59,07
21	13 21,38	21,40	+0,02	109 55 54,25	50,90	—3,35	59,37	57,48
22	17 34,63	34,40	—0,23	42 21,28	18,70	—2,58	16 1,52	16 0,17
23	21 46,83	46,60	—0,23	28 24,67	24,60	—0,07	1,80	1,19
24	25 58,45	58,00	—0,45	14 5,85	8,90	+3,05	2,74	2,06
25	30 8,79	8,60	—0,19	108 59 28,16	32,10	+3,94	2,92	
26	34 18,46	18,40	—0,06	44 29,49	34,50	+5,01	15 59,00	15 58,02
27	38 27,78	27,50	—0,28	29 12,39	16,50	+4,11	16 2,28	58,97
28	42 36,22	35,70	—0,52	13 34,71	38,30	+3,59	2,05	16 1,00
29	46 43,54	43,10	—0,44	107 57 36,06	40,40	+4,34	5,32	
30	50 50,31	49,70	—0,61	41 21,06	23,20	+2,14	2,02	15 57,80
31							2,45	
Feb. 1	59 0,80	0,50	—0,30	7 49,33	52,40	+3,07	2,08	
2	21 3 4,66	4,60	—0,06	106 50 35,36	39,60	+4,24	5,02	59,15
3	7 8,55	8,00	—0,55	33 6,15	9,10	+2,95	2,52	
4	11 10,75	10,60	—0,15	15 17,07	21,30	+4,23	1,62	
5	15 12,96	12,40	—0,56	105 57 18,11	16,70	—1,41	2,14	
6	19 13,84	13,30	—0,54	38 56,60	55,70	—0,90	1,00	
7	23 13,43	13,30	—0,13				1,98	
8	27 12,69	12,60	—0,09	1 31,04	26,00	—5,04	3,30	16 4,07
9				104 42 21,02	18,30	—2,72		1,92

Digitized by Google

1837.	Right Ascension from observation.	Right Ascension from N. A.	Error of Tables.	North Polar Distance from observation.	North Polar Distance from N. A.	Error of Tables.	Mean Semidiameter. Horizontal.	Mean Semidiameter. Vertical.
	h. m. s.	s.	"	° ' "	"	"	' "	' "
Feb. 10	21 35 8,67	8,80	+0,13	104 22 51,27	55,80	+4,53	16 2,40	
11	39 5,92	5,70	—0,22	3 16,34	18,00	+1,66	1,27	16 3,24
12				103 43 26,17	28,50	+2,33		15 59,50
13	46 57,52	57,19	—0,33	23 19,59	24,60	+5,01	2,02	16 2,55
14	50 52,04	51,60	—0,44	3 1,25	7,80	+6.55	1,70	15 59,47
15	54 45,65	45,40	—0,25	102 42 33,40	38,50	+5,10	1,70	16 3,02
16	58 39,21	38,50	—0,71	21 56,40	57,00	+0,60	1,44	15 59,15
17	22 2 31,79	30,90	—0,89	1 2,63	3,90	+1,27	2,90	16 1,15
18	6 23,08	22,20	—0,88	101 39 58,03	59,50	+1,47	0,86	1,67
19	10 13,54	13,10	—0,44	18 43,42	44,10	+0,68	2,58	4,00
20	14 3,94	3,30	—0,64	100 57 14,04	18,00	+3,96	1,52	
21	17 53,19	52,80	—0,39	35 41,40	42,10	+0,70	3,00	0,68
24							0,35	
25							2,20	
26	36 51,43	51,10	—0,33	98 45 19,56	23,50	+3,94	4,76	
27	40 37,34	37,10	—0,24	22 50,37	54,70	+4,33	1,40	0,92
28	44 22,94	22,70	—0,24	0 15,85	18,40	+2,55	1,70	15 59,84
Mar. 1	48 7,99	7,80	—0,19	97 37 33,63	35,10	+1,47	15 55,37	16 0,81
2	52 52,19	52,30	+0,11	14 44,47	45,20	+0,73	57,38	15 57,64
3	55 36,17	36,30	+0,13	96 51 51,38	48,90	—2,48	59,08	16 3,67
4	59 19,70	19,80	+0,10	28 46,86	46,90	+0,04	16 0,99	2,61
5	23 3 2,83	2,80	—0,03	5 39,77	39,40	—0,37	1,20	
6	6 45,61	45,40	—0,21	95 42 26,66	26,70	+0,04	15 58,74	1,62
7	10 27,32	27,40	+0,08	19 11,27	9,40	—1,87	16 1,90	15 57,75
8	14 9,22	9,20	—0,02	94 55 52,63	47,90	—4,73	0,04	16 1,50
9	17 50,52	50,60	+0,08	32 23,38	22,60	—0,78	2.34	3,07
10	21 31,50	31,60	+0,10	8 55,18	53,90	—1,28	1,80	4,78
11	25 12,64	12,40	—0,24	93 45 20,21	22,30	—2,09	1,58	15 59,45
12	28 52,29	52,60	+0,31	21 42,75	48,10	—5,35	2,58	16 1,28
13	32 32,85	32,60	—0,25	92 58 9,92	11,70	+1,78	2,47	15 58,46
14				34 31,86	33,40	+1,54	0,50	59,66
15				10 53,36	53,70	+0,34	3,37	59,74
16				91 47 10,81	12,90	+2,09	2,05	16 1,47
17	47 9,35	9,80	+0,45	23 29,01	31,40	+2,39	0,98	0,62
18				90 59 47,86	49,60	+1,74	15 59,45	
19				36 14,59	7,80	—6,79	16 1,48	15 59,62
20				12 29,46	26,30	—3,16	2,82	16 1,84
21				89 48 45,32	45,50	+0,18	15 55,82	
22				25 5,56	6,00	+0,44	16 1,88	1,15
23	0 8 59,74	59,70	—0,04	1 24,70	26,70	+2,00	1,40	0,37
24	12 37,77	37,70	—0,07	88 37 47,97	51,00	+3,03	15 59,34	15 59,86
25	14 15,17	15,60	+0,43	14 12,12	16,20	+4,08	16 0,68	
26				87 50 44,10	43,80	—0,30	1,44	
27	23 31,73	31,40	—0,33	27 13,12	14,00	+0,88	0,87	16 1,30
28	27 8,95	9,30	+0,35	3 45,31	47,30	+1,99	0,84	2,84
29	30 46,71	47,30	+0,59	86 40 21,81	23,70	+1,89	0,48	1,32
30	34 25,55	25,40	—0,15	17 4,74	4,00	—0,74	1,25	15 58,95
31	38 3,24	3,50	+0,26	85 53 47,78	48,20	+0,42	1,97	59,87
April 1	41 41,90	41,60	—0,30	30 33,72	36,80	+3.08		
2	45 19,99	20,00	+0,01	7 33,40	30,10	—3,30	0,64	
3	48 58,45	58,50	+0,05	84 44 34,53	28,50	—6,03	0,35	16 1,40

1837.		Right Ascension from observation.	Right Ascension from N. A.	Error of Tables.	North Polar Distance from observation.	North Polar Distance from N. A.	Error of Tables.	Mean Semidiameter. Horizontal.	Mean Semidiameter. Vertical.
		h. m. s.	s.	"	° ' "	"	"	' "	' "
April	4				84 21 37,58	32,50	—5,08	16 0,77	16 2,02
	5				83 58 41,87	42,40	+0,53	15 59,50	4,15
	6				36 0,39	58,50	—1,89	59,20	3,68
	7	1 3 33,78	33,90	+0,12	13 21,02	21,00	—0,02	59,80	
	8	7 13,40	13,20	—0,20	82 50 49,49	50,60	+1,11	16 0,37	3,24
	9	10 52,96	52,90	—0,06	28 26,31	27,50	+1,19	1,96	
	11	18 12,83	12,80	—0,03	81 44 5,52	4,70	—0,82	1,43	15 58,84
	12	21 52,92	53,20	+0,28	22 6,05	5,70	—0,35	2,00	16 0,85
	13	25 33,83	33,80	—0,03	0 17,62	15,50	—2,12	0,60	15 58,22
	14	29 15,06	14,70	—0,36	80 38 38,25	34,20	—4,05	0.90	58,44
	15	32 55,94	55,90	—0,04	17 4,54	2,30	—2,24	1,62	57,18
	16				79 55 44,21	40,30	—3,91	0,28	16 2,16
	17	40 19,31	19,50	+0,19	34 33,32	28,40	—4,92	15 59,84	2,38
	18	44 2,02	1,80	—0,22	13 25,28	26,70	+1,42	16 1,57	0,95
	19	47 44,38	44,50	+0,12	78 52 28,82	35,80	+6,98	4,45	15 58,25
	20	51 27,87	27,60	—0,27	31 53,18	55,80	+2,62	2,18	16 1,02
	21	55 11,20	11,20	0,00	11 26,64	27,10	+0,46	0,15	15 59,62
	22	58 55,42	55,10	—0,32	77 52 6,64	10,00	+3,36	1,42	16 0,87
	23	2 2 39,60	39,60	0,00	32 4,97	4,60	—0,37	2,07	15 58,43
	24	6 24,63	24,50	—0,13	11 11,68	11,50	—0,18	0,90	16 0,68
	25	10 10,23	9,90	—0,33	76 51 32,63	30,90	—1,73	1,26	15 59,71
	26	13 55,95	55,80	—0,15	32 2,22	3,00	+0,78	1,70	16 0,34
	27	17 42,43	42,10	—0,33	12 48,79	48,10	—0,69	0,97	1,44
	28	21 29,50	29,10	—0,40	75 53 46,03	46,70	+0,67	1,30	15 59,97
	29	25 17,16	16,60	—0,56	35 1,97	59,00	—2,97	0,24	59,87
	30	29 4,70	4,60	—0,10	16 26,24	25,70	—0,54	2,32	59,08
May	1	32 53,35	53,10	—0,25	74 58 11,16	6,60	—4,56	2,18	16 0,33
	2	36 42,35	42,20	—0,15	40 1,39	2,30	+0,91	0,92	1,64
	3	40 32,24	31,90	—0,34	22 10,71	13,10	+2,39	0,92	1,86
	4	44 22,34	22,20	—0,14	4 34,51	39,30	+4,79	0,95	1,44
	5				73 47 17,31	21,30	+3,99	16 1,40	15 59,56
	6				30 15,14	19,40	+4,26	15 59,44	16 0,72
	8				72 57 0,56	5,00	+4,44	16 1,10	15 57,56
	9				40 49,11	53,30	+4,19	0,60	16 1,00
	10	3 7 35,42	35,40	—0,02	24 56,36	58,90	+2,54	1,98	
	11	11 29,69	29,40	—0,29	9 20,37	22,30	+1,93	1,37	0,24
	12	15 24,40	24,10	—0,30	71 54 2,65	3,60	+0,95	0,46	1,95
	13				39 2,27	3,30	+1,03	1,90	
	14				24 19,24	21,50	+2,26		
	15				9 56,97	58,60	+1,63	2,05	
	16				70 55 53,51	54,80	+1,29	0,64	
	17				42 7,03	10,40	+3,37		
	18				28 52,05	45,50	—6,55	15 59,62	
	23				69 26 43,39	43,10	—0.29		
	24	4 3 4,28	3,90	—0,38	15 19,85	20,70	+0,85	16 2,56	
	25	7 6,37	5,80	—0,57	4 18,85	19,50	+0,65	1,82	4,10
	28				68 33 20,71	25,60	+4,89	0,48	
	29							2,78	
	30	27 23,03	22,70	—0.33				2,47	
	31	31 27,76	27,50	—0,26	5 45,45	51,30	+5,85		
June	1				67 57 27,01	25,10	—1,91	1,04	

Digitized by Google

1837.		Right Ascension		Error of Tables.	North Polar Distance		Error of Tables.	Mean Semidiameter.	
		from observation.	from N. A.		from observation.	from N. A.		Horizontal.	Vertical.
		h. m. s.	s.	"	° ' "	"	"	' "	' "
June	2	4 39 38,21	38,30	+0,09	67 49 18,24	21,90	+3,66	16 0,82	
	3				41 42,13	41,90	−0,23	1,02	
	4				34 20,93	25,20	+4,27	1,37	
	5	4 51 57,48	57,70	+0,22	27 30,29	32,20	+1,91	1,06	15 58,87
	6	56 4,75	4,80	+0,05	20 59,23	2,70	+3,47	2,22	
	7	5 0 12,30	12,30	0,00	14 54,06	57,10	+3,04	1,35	
	8	4 20,40	20,00	—0,40	9 13,66	15,40	+1,74	1,66	58,76
	9	8 28,32	27,90	—0,42	3 55,99	57,90	+1,91	4,40	
	10	12 36,58	36,20	—0,38	66 59 5,40	4,60	—0,80	1,66	
	11	16 45,11	44,60	—0,51	54 34,62	35,60	+0,98	3,54	
	12	20 53,30	53,30	0,00	50 33,05	31,10	—1,95	2,82	
	13	25 2,12	2,10	—0,02	46 44,64	51,00	+6,36	1,75	
	14	25 10,98	11,00	+0,02	43 36,19	35,10	—1,09	0,86	
	15	33 20,60	20,20	—0,40	30 43,80	44,40	+0,60	0,57	
	16	37 29,79	29,40	—0,39	38 15,72	18,20	+2,48	0,02	
	17	41 38,61	38,70	+0,09	36 14,74	16,50	+1,76	0,72	
	18				34 33,70	39,60	+5,90	15 59,84	
	19				33 26,08	27,50	+1,42	16 3,54	
	22	6 2 25,94	26,20	+0,26	32 17,08	19,20	+2,12	2,52	
	23	6 35,60	35,60	0,00	32 44,25	46,00	+1,75	0,75	
	24	10 44,76	45,10	+0,34	33 30,50	37,60		15 59,50	
	25	14 54,20	54,40	+0,20	34 55,90	54,00	—1,90	16 1,22	
	26	19 3,92	3,60	—0,32	36 31,31	35,10	+3,79	0,75	
	27	23 12,43	12,90	+0,47	38 41,04	40,80	—0,24	16 0,88	
	29	31 30,61	30,80	+0,19	44 2,47	6,20	+3,73	15 59,95	
	30	35 39,58	39,40	−0,18	47 24,98	25,70	+0,72	57,82	
July	1				51 11,67	9,70	—1,97	59,20	
	2				55 20,18	18,00	—2,18	59,95	
	3	48 4,92	4,00	—0,92				15 58.58	
	4				67 4 46,40	47,00	+0,60	16 0,12	
	5				10 6,79	8,60	+1,81	16 0,70	
	6				15 52,86	52,00	—0,86	15 59,95	
	7				22 1,37	0,10	—1,27	16 0,92	
	8	7 8 39,58	39,00	—0,58	28 23,87	32,90		0,86	
	9	12 44,99	44,80	—0,19	35 26,79	27,00	+0,21	1,35	
	10	16 50,15	50,30	+0,15	42 39,51	45,40	+5,89	1,77	
	11	20 55,43	55,30	—0,13	50 28,30	26,80	—1,50	1,30	
	12	24 59,84	59,80	—0,04	58 25,29	30,90	+5,61	2,45	
	13	28 4,62	3,90	—0,72	68 6 52,95	57,80	+4,85		
	14	33 8,11	7,50	—0,61	15 38,20	47,10		15 59,34	
	15	37 11,58	10,70	—0,88	24 58,01	58,60	+0,59	16 1,44	
	16	41 13,36	13,30	—0,06	34 25,74	32,10		1,12	
	17				44 25,30	27,40	+2,10		
	18	49 17,40	16,90	—0,50	54 35,59	44,30		15 59,50	
	19	53 18,52	18,00	—0,52	69 5 21,21	22,60	+1,39	16 2,30	
	20	57 18,51	18,40	—0,11					
	23	8 9 16,77	16,50	—0,27	51 28,40	25,00	—3,40	1,06	
	24				70 3 48,69	47,90	—0,79	0,08	
	25				16 24,97	29,90	+4,93		
	27				42 54,41	51,80	—2,61		
	28	29 3,04	2,30	—0,74	56 29,16	32,20	+3,04	0,37	

Digitized by Google

1837.		Right Ascension		Error of Tables.	North Polar Distance		Error of Tables.	Mean Semidiameter.	
		from observation.	from N. A.		from observation	from N. A.		Horizontal.	Vertical.
		h. m. s.	s.	s.	° ′ ″	″	″	′ ″	
July	29				71 10 34,87	32,60	—2,27	16 1,62	
	30				24 47,94	50,60	+2,66	2,14	
	31				39 26,92	26,10	—0,82	16 2,27	
Aug.	2	48 34,21	33,70	—0,51	72 9 30,94	33,10	+2,16	15 59,56	
	3							15 59,07	
	5				56 53,21	54,00	+0,79	16 0,70	
	7	9 7 49,62	49,40	—0,22	73 29 50,51	51,20	+0,69	0,82	
	9	15 27,73	27,50	—0,23	74 3 53,13	52,10	—1,03	1,50	
	10	19 16,00	15,70	—0,30	21 13,34	16,60	+3,26	1,24	
	11	23 3,65	3,30	—0,35	38 55,51	54,10	—1,41	0,95	
	12	26 50,67	50,20	—0,47	56 50,33	47,30	—3,03	1,06	
	13	30 36,80	36,70	—0,10	75 15 1,03	54,90		16 0,20	
	20				77 28 1,20	4,80	+3,60	15 58,74	
	21	10 0 29,38	28,90	—0,48					
	22	4 10,69	10,80	+0,11	78 7 54,37	59,80	+5,43	16 0,64	
	23	7 52,48	52,20	—0,28	28 9,16	13,50	+4,34	16 0,24	
	24	11 33,31	33,20	—0,11	48 38,59	40,30	+1,71	15 59,84	
	25				79 9 13,15	16,90	+3,75	15 59,12	
	28	26 13,48	13,40	—0,08				16 0,64	
	29	29 52,51	52,50	—0,01	33 22,19	24,80	+2,61	1,44	
	30				54 55,36	50,50	—4,86	0,28	
	31				81 16 20,96	24,90	+3,94	16 0,55	
Sep.	1				38 7,20	7,70	+0,50	15 59,92	
	2				59 56,01	57,60	+1,59		
	4				82 44 0,57	2,00	+1,43	16 1,10	
	5				83 6 11,36	15,00	+3,64	16 2,98	
	6				28 42,06	35,70		15 58,65	
	7				50 57,29	0,80	+3,51	16 1,80	
	8				84 13 32,39	33,00	+0,61	15 59,64	
	9	11 9 43,18	42,70	—0,48	36 11,18	11,90	+0,72	15 59,70	
	10				58 57,69	53,90	—3,79	16 2,20	
	11				85 21 44,47	42,00	—2,47	15 59,82	
	12	11 20 30,11	30,00	—0,11	44 40,46	35,80	—4,66	16 0,86	
	13	24 5,72	5,50	—0,22	86 7 32,11	32,10	—0,01	0,60	
	14	27 41,20	40,90	—0,30	30 36,22	33,40	—2,82	1,17	
	15	31 16,69	16,40	—0,29	53 37,86	38,40	+0,54	0,52	
	16	34 51,78	51,70	—0.08	87 16 48,83	47,00	—1,83	0,37	
	17	38 27,60	27,00	—0,60	39 55,75	58,70	+2,95	1,15	
	18	42 2,70	2,40	—0,30	88 3 11,53	13,30	+1,77	0,66	
	19	45 37,76	37,80	+0,04	26 31,04	31,60	+0,56	1,37	
	20	49 13,46	13,20	—0,26	49 51,21	50,20	—1,01	0,20	
	21	52 48,59	48,70	+0,11	89 13 14,71	12,60	—2,11	0,22	
	22	56 24,38	24,20	—0,18	36 39,94	34,70	—5,24	16 0,77	
	23	12 0 0,02	0,00	—0,02	90 0 2,65	59,10	—3,55	15 59,77	
	24	3 35,65	35,90	+0,25	23 29,99	24,30	—5,69	16 1,44	
	25	7 12,08	11,80	—0,28	46 51,60	50,30	—1,30	16 0,55	
	26	10 48,25	48,10	—0,15	91 10 17,76	16,20	—1,56	15 59,97	
	27	12 14 24,73	24,50	—0.23	33 41,44	42,20	+0,76	16 1,06	
	28	18 1,04	1,00	—0,04	57 11,49	7,70	—3,79		
Oct.	5				94 40 21.17	19,50	—1,67	0,22	
	6				95 3 31,37	27,10	—4,27	0,48	

Digitized by Google

1837.		Right Ascension from observation.	Right Ascension from N. A.	Error of Tables.	North Polar Distance from observation.	North Polar Distance from N A.	Error of Tables.	Mean Semidiameter. Horizontal.	Mean Semidiameter. Vertical.
		h. m. s.	″	″	° ′ ″	″	″	′ ″	
Oct.	7				95 25 34,32	30,90	—3,42	16 0,57	
	9				96 12 34,75	25,30		1,12	
	10	13 1 43,52	43,10	—0,42	35 18,17	15,00	—3,17	16 0,28	
	11				57 58,43	59,30	+0.87	15 59,68	
	12	9 6,76	5,50	—1,26	97 20 41,73	37,80	—3,93	16 1,90	
	13	12 47,81	47,40	—0,41	43 5,97	10,30	+4,33	0,92	
	14	16 30,42	29,80	—0,62	98 1 34,99	36,40	+1,41	0,22	
	16	23 56,83	56,50	—0,33	50 4,12	8,20	+4,08		
	17				99 12 7,14	12,90	+5,76	15 59,12	
	18				34 9,93	9.60	—0,33	15 59,42	
	21				100 39 14,10	10,10	—4,00	16 0,92	
	22				101 0 36,05	31,60	—4,45	1,15	
	23				21 38,86	43,30	+4,44	15 59,84	
	24				42 48,59	45,10	—3,49	15 59,42	
	25				102 3 35,41	36,20	+0,79	16 0,60	
Nov.	6				105 57 35,31	30,70	—4,61	15 58,18	
	13				107 56 52,56	55,40	+2,84	15 59.58	
	19				108 54 43,63	10,50		16 2,56	
	21	15 46 13,36	13,30	—0,06					
	24				110 32 55,07	49,20		16 0,30	
	25				44 54,35	49,70	—4,65		
	26				56 25,09	26,90	+1,81	15 59,56	
	27	11 39,48	38,70	—0,78	111 7 44,51	40,50	—4,01		
	29				28 55,64	55,80	+0,16	16 0,48	
	30				38 59,22	56,90	—2,32	15 59,75	
Dec.	1				48 35,62	33,20	—2,42		
	2				57 46,46	44,20	—2,26	16 0,84	
	10				112 55 35,78	35,00	—0,78	15 58,98	
	11				113 0 53,21	48,50	—4,71	16 0,00	
	14				13 42,49	44,40	+1,91	15 59,92	
	15				17 6,12	7,70	+1,58	16 1,75	
	16				19 59,82	3,10	+3,28	16 1.08	
	19	17 47 55,27	55,00	—0,27	27 59,57	1,10	+1,53	15 58,90	
	20	52 21,83	21,60	—0,23	27 4,85	4.10	—0,75	15 59,38	
	21	56 48,22	48,20	—0,02	27 35,43	38,70	+3,27		
	22				27 51,48	45.00			
	23				27 24,09	23,00	—1,09		
	24	18 10 8,56	8,40	—0,16	26 32,87	32,50	—0,37		
	25	14 35,43	35,20	—0,23					
	26	19 2,04	1,70	—0,34	23 26,43	26,70	+0,27		
	27	23 28,67	28,10	—0,57	21 9,34	11,40	+2,06		
	28	27 55,39	54,50	—0,89					
	29	32 21,35	20,80	—0,55	15 15,39	16,40	+1.01		
	30				11 34,39	36,70	+2.31		
	31				7 32,70	29,10	—3,60		

Digitized by Google

In conformity with the plan followed in former volumes, I have here computed the value of the Mean Semidiameter of the Sun, from the observed transits—not that I have ever for a moment expected to obtain a very accurate determination by this means,—but rather from a desire of tracing the changes, if any, which might result in the method of estimating time from continued practice: the result has been simply this,—that the observer who at first observed a larger diameter than myself, has, after two or three years practice in observing, continued to observe the same larger diameter; and another Assistant who appeared to note the Diameter in defect, has continued to do so: Among the circle observations too, there appears to be the same cause in opperation,—each observer sees the Sun under a different angle, or forms a different judgment with regard to his being in contact with the wire; the results altogether are as follows—

				Sun's Mean Semidiameter. Horizontal.	Vertical.
				′ ″	′ ″
From 965	Observations in former years	=	——	16 1,48	
141	—— ——	=	——		16 1,59
489	—— 1836 and 1837	=	——	1,72	
150	—— ——	=	——		0,77

Selecting from the above observations those made near to the Solstices, we will proceed to compute the value of the Obliquity of the Ecliptic—

Observations of the Sun made near to the Summer Solstices of 1836 *and* 1837 *applied to the determination of the Obliquity of the Ecliptic.*

1836.	N. P. D.	Reduction.	⊙'s Lat.	Solsticial N. P. D.	Correction for ☽r Nut.	Correction for ⊙ r Nut. $+\frac{t.\ 0'',46}{365}$	Mean Solsticial N. P. D. Reduced to Jan. 1.
	° ′ ″	° ′ ″	″	° ′ ″	″	″	° ′ ″
May 21	69 47 33,68	3 15 16,70	+0,93	66 32 17,91	+6,05	—0,51	66 32 23,45
22	69 35 33,21	3 3 16,46	0,95	17,70	,06	,52	23,24
23	69 23 51,81	2 51 38,46	0,93	13,28	,06	,53	18,81
24	69 12 34,03	2 40 20,18	0,89	14,74	,07	,53	20,28
25	69 1 35,19	2 29 24,62	0,81	11,38	,08	,54	16,92
26	68 51 1,85	2 18 49,76	0.72	12,81	,09	,55	18,35
28	68 30 58,41	1 58 47,03	0,48	11,86	,09	,57	17,38
30	68 12 25,59	1 40 13,33	0,21	12,47	,10	,58	17,99
31	68 3 44,01	1 31 30,60	0,09	13.60	,11	,60	19,11
June 1	67 55 23,69	1 23 9,60	—0,02	14,07	,12	,61	19,58
6	67 19 31,42	0 47 18,15	0.19	13,08	,17	,67	18,58
7	67 13 31,71	0 41 18,70	0,13	12,88	,18	,68	18,38
8	67 7 53,48	0 35 42,88	0.04	10,56	,19	,69	16,06
9	67 2 45.78	0 30 31,00	+0,05	14,83	,20	,71	20,32
10	66 58 0,04	0 25 43,39	0.18	16,83	,20	,71	22,32
11	66 53 35,48	0 21 20,24	0,30	15,54	,21	,72	21,03

Digitized by Google

1836.	N. P. D.	Reduction.	☉'s Lat.	Solsticial N. P. D.	Correction for ☽ r Nut.	Correction for ☉ r Nut. $+\frac{t\ 0'',46}{365}$	Mean Solsticial N. P. D. Reduced to Jan. 1
	° ′ ″	° ′ ″	″	° ′ ″	″	″	° ′ ″
June 12	66 49 34,49	0 17 20,82	+0,43	66 32 14,10	+6,22	—0,72	66 32 19,60
13	66 46 2,33	0 13 46,15	,56	15,74	,23	,73	21,24
15	66 40 2,00	0 7 51,77	,78	11,01	,24	,74	16,51
16	66 37 45,86	0 5 31,20	,85	15,51	,25	,74	21,02
17	66 35 48,77	0 3 35,42	,89	14,24	,26	,75	19,75
18	66 34 18,84	0 2 4,43	,92	15,33	,26	,76	20,84
19	66 33 11,35	0 0 58,40	,91	13,86	,27	,75	19,38
20	66 32 32,33	0 0 16,83	,87	16,37	,27	,75	21,89
28	66 41 53,58	0 9 38,20	— ,04	15,34	,31	,76	20,92
July 2	66 56 23,07	0 24 8,50	,27	14,30	,33	,74	19,89
9	67 37 11,21	1 4 57,63	+ ,34	13,92	,36	,68	19,60
10	67 44 33,17	1 12 21,32	,47	12,32	,36	,67	18,01
14	68 17 54,87	1 45 46,15	,82	9,54	,38	,65	15,27
15	68 27 13,12	1 55 2,56	,85	11,41	,38	,64	17,15
16	68 36 55,13	2 4 42,26	,84	13,71	,39	,61	19,49
17	68 46 53,39	2 14 42,40	,80	11,79	,39	,60	17,58
19	69 8 2,44	2 35 48,40	,65	14,69	,41	,58	20,52
20	69 19 8,42	2 46 54,97	,54	13,99	,42	,57	19,84
1837.							
May 24	69 15 19,85	2 43 4,29	—0,30	66 32 15,26	+7,97	—0,53	66 32 22,70
25	69 4 18,85	2 32 2,59	—0,29	15,97	7,97	,54	23,40
31	68 5 45,45	1 33 36,11	+0,27	9,61	8,01	,60	17,02
June 2	67 49 18,24	1 17 8,00	,53	10,77	,02	,62	18,17
5	67 27 30,29	0 55 18,53	,82	12,58	,03	,66	19,95
6	67 20 59,23	0 48 48,88	,86	11,21	,03	,67	18,57
7	67 14 54,06	42 43,15	,89	11,80	,03	,68	19,15
8	67 9 13,66	37 1,03	,87	13,50	,04	,69	20,85
9	67 3 55,99	31 43,60	,83	13,22	,04	,71	20,55
10	66 56 5,40	26 50,27	,77	15,90	,04	,71	23,23
11	66 54 34,62	22 21,10	,67	14,19	,04	,72	21,51
12	66 50 33,05	18 16,87	,56	16,74	,05	,72	24,07
13	66 46 44,64	14 36,63	,43	8,44	,05	,73	15,76
14	66 43 36,19	11 21,00	,30	15,49	,05	,73	22,81
15	66 40 43,80	8 29,56	+0,17	14,41	,05	,74	21,72
16	66 38 15,72	6 3,15	+0,06	12,63	,06	,74	19,95
17	66 36 14,74	4 1,67	—0,05	14,02	,06	,75	21,33
22	66 32 17,08	0 4,25	,22	12,61	,10	,76	19,95
23	66 32 44,25	0 31,16	,16	12,93	,10	,76	20,27
24	66 33 30,50	1 22,80	,07	7,63	,10	,76	14,97
25	66 34 55,90	2 39,25	+0,03	16,68	,10	,76	24,02
26	66 36 31,31	4 20,67	,15	10,79	,11	,76	18,14
27	66 38 41,04	6 26,92	,29	14,41	,11	,76	21,76
29	66 44 2,47	11 51,98	,55	11,04	,12	,75	18,41
30	66 47 24,98	15 11,82	,66	13,82	,12	,75	21,19
July 8	67 28 23,87	56 19,00	,72	5,59	,14	,69	13,04
9	67 35 26,79	1 3 19,28	,61	8,12	,14	,68	15,58
10	67 42 39,51	10 31,00	,49	9,00	,14	,67	16,47
11	67 50 28,30	18 12,75	,35	15,90	,14	,66	23,38
12	67 58 25,29	26 16,57	,22	8,94	,15	,66	16,43
13	68 6 52,95	34 46,32	,10	6,73	,15	,65	13,23
14	68 15 38,20	43 33,68	— ,01	4,51	,16	,64	12,03

Digitized by Google

1837.	N. P. D.	Reduction.	☉'s Lat.	Solsticial N. P. D.	Correction for ☽ r Nut.	Correction for ☉ r Nut. $+\frac{t.\ 0'',46}{365}$	Mean Solsticial N. P. D. Reduced to Jan. 1.
	° ′ ″	° ′ ″	″	° ′ ″	″	″	° ′ ″
July 15	68 24 58,01	1 52 46,14	—0,10	66 32 11,77	+8,16	—0,62	66 32 19,31
16	68 34 25,74	2 2 17,60	,17	7,97	,17	,61	15,53
18	68 54 35,59	22 30,90	,22	4,47	,17	,59	12,05
19	69 5 21,21	33 9,63	,20	11,38	,18	,58	18,98
23	69 51 28,40	3 19 11,47	+ ,13	17,06	,21	,54	24,73

Observations of the Sun made near to the Winter Solstices of 1836 *and* 1837 *applied to the determination of the Obliquity of the Ecliptic.*

1836.	N. P. D.	Reduction.	☉'s Lat.	Solsticial N. P. D.	Correction for ☽ r Nut.	Correction for ☉ r Nut $+\frac{t.\ 0'',46}{365}$	Mean Solsticial N. P. D. Reduced to Jan. 1.
	° ′ ″	° ′ ″	″	° ′ ″	″	″	° ′ ″
Jan. 2	113 0 25,15	+0 27 14,78	+0,07	113 27 40,00	—5,08	+0,49	113 27 35,41
3	112 55 8,28	0 32 30,79	+0,18	39,25	,09	,48	33,84
4	112 49 28,38	0 38 14,19	+0,29	42,86	,10	,47	38,23
6	112 36 37,82	0 41 1,94	+0,42	40,18	,11	,45	36,52
7	112 29 32,95	0 58 6,45	+0,44	39,84	,12	,44	35,16
8	112 22 5,58	1 5 37,05	+0,44	43,07	,13	,43	38,37
9	112 14 5,82	1 13 33,98	+0,40	40,20	,13	,43	35,50
10	112 5 43,26	1 21 58,35	+0,33	41,94	,14	,42	37,22
11	111 56 52,36	1 30 48,50	+0,23	41,09	,15	,41	36,25
13	111 37 58,00	1 49 44,63	0,00	42,63	,16	,39	37,86
14	111 27 50,49	1 59 50,06	—0,12	40,41	,17	,38	35,62
16	111 6 28,03	2 21 16,79	—0,37	44,45	,18	,37	39,64
17	110 55 7,89	2 32 35,98	—0,47	43,40	,19	,34	38,55
18	110 43 25,71	2 44 19,65	—0,55	44,81	,10	,33	39,94
19	110 31 16,97	2 56 27,53	—0,62	42,88	,21	,31	37,98
21	110 5 55,61	3 21 51,55	—0,65	46,51	,23	,27	41,55
Nov. 22	110 10 48,53	3 16 54,52	—0,19	42,86	—7,11	+0,68	36,43
23	110 23 29,13	3 4 15,40	—0,06	44,47	,11	,70	38,06
26	110 59 8,64	2 28 33,48	+0,23	42,35	,13	,75	35,97
27	111 10 14,52	2 17 26,00	+0,30	40,82	,14	,77	34,45
28	111 21 1,82	2 6 42,67	+0,32	44,81	,14	,79	38,46
29	111 31 20,53	1 56 22,90	+0,33	43,76	,15	,80	37,41
Dec. 2	111 59 47,39	1 27 53,61	+0,15	41,15	,17	,84	34,82
4	112 16 43,69	1 11 1,18	—0,08	44,79	,18	,87	38,48
5	112 24 29,91	1 3 13,00	—0,22	42,69	,18	,88	36,39
6	112 31 51,23	0 55 51,70	—0,35	42,58	,19	,89	36,28
7	112 38 49,79	0 48 56,56	—0,48	45,87	,19	,90	39,58
11	113 1 57,36	0 25 44,77	—0,81	41,32	,21	,94	35,05
12	113 6 38,05	0 21 4,98	—0,83	42,20	,21	,95	35,94
17	113 22 57,07	0 4 43,08	—0,49	39,66	,24	,98	33,40
19	113 26 16,19	0 1 26,56	—0,23	42,52	,25	,99	36,26
23	113 27 10,92	0 0 32,96	+0,22	44,10	,27	,99	38,82
24	113 26 13,43	0 1 30,33	+0,28	44,04	,27	,99	38,76
31	113 6 20,17	0 21 20,46	—0,06	40,57	,30	,97	34,24

Digitized by Google

1837.		N. P. D.	Reduction.	☉'s Lat.	Solsticial N. P. D.	Correction for ☽ r Nut.	Correction for ☉ r Nut. $+ t. \frac{0'',46}{365}$	Mean Solsticial N. P. D. Reduced to Jan. 1.
		° ′ ″	° ′ ″	″	° ′ ″	″	″	° ′ ″
Jan.	3	112 50 55,34	+0 36 49,08	—0,43	113 27 43,99	—7,32	+0,49	113 27 37,16
	5	112 38 19,13	49 25,07	,65	43,56	,33	,46	36,68
	6	112 31 22,36	56 23,83	,73	45,46	,34	,45	38,57
	7	112 24 1,01	1 3 47,85	,79	48,07	,34	,44	41,17
	8	112 16 8,08	11 40,08	,82	47,34	,35	,43	40,42
	9	112 7 45,93	19 57,60	,81	42,72	,36	,43	35,79
	10	111 59 3,92	28 41,81	,78	44,95	,37	,42	38,00
	11	111 49 55,77	37 50,82	,72	45,87	,38	,41	38,90
	12	111 40 20,05	47 26,00	—0,63	45,42	,38	,40	38,44
	19	110 21 51,43	3 5 58,15	+0,21	49,79	,40	,31	42,70
	20	110 9 2,85	18 44,05	+0,29	47,19	,41	,30	40,08
Dec.	19	113 25 59,57	0 1 44,67	—0,04	44,20	—8,65	,99	36,54
	20	27 4,85	0 41,78	,16	46,47	,65	,99	38,81
	21	27 35,43	0 7,33	,30	42,46	,66	,99	34,79
	24	26 32,87	1 13,77	,68	45,96	,68	,99	38,27
	26	23 26,43	4 19,79	,85	45,37	,69	,98	37,66
	27	21 9,34	6 34,94	,90	43,38	,69	,98	35,67
	29	15 15,39	12 30,70	,92	45,17	,71	,98	37,44

Taking the means, which it will be observed are the mean values for the commencement of the respective years, and employing the annual variation, (—0″,46) we have determined altogether as follows—

Mean Obliquity January 1, 1835.

	No. obs.	Summer Obs. ° ′ ″	No. obs.	Winter Obs. ° ′ ″
In the year 1831	from 33	23 27 38,57	36	23 27 37,14
—— —— 1832	—— 33	42,21	40	37,82
—— —— 1833	—— 33	40,37	47	38,15
—— —— 1834	—— 28	41,67	22	37,00
—— —— 1835	—— 32	40,58	30	36,56
—— —— 1836	—— 34	40,96	34	37,41
—— —— 1837	—— 37	41,70	18	39,09
Mean =		23 27 40,87		23 27 37,57

Whence, THE MEAN OBLIQUITY JAN. 1st 1835 = 23° 27′ 39″,22

Digitized by Google

Observations of the Sun made near to the Vernal Equinoxes of 1836 *and* 1837 *applied to the determination of the error of the assumed Equinoctial Point.*

1836.		Observed N. P. D.	Cor.	N. P. D. corrected for ⊙'s Latitude.	Computed A. R.	Observed A. R.	Error of Eq. Point.	REMARKS.
		° ′ ″	″		h. m. s.	m. s.	″	
Feb.	12	103 58 37,19	—0,18	103 58 37,01	21 40 1,85	40 1,54	—0,31	
	13	103 38 41,35	0,28	103 38 41,07	43 58,25	43 57,52	—0,73	
	14	103 18 37,35	0,36	103 18 36,99	47 52,83	47 52,40	—0.43	
	15	102 58 14,93	0,42	102 58 14,51	51 47,71	51 47,18	—0,53	
	16	102 37 42,53	0,45	102 37 42,08	55 41,53	55 41,20	—0,33	
	17	102 16 58,93	0,46	102 16 58,47	59 34,10	59 34,09	—0 01	
	18	101 56 0,78	0,44	101 56 0,34	22 3 26.65	3 26,24	—0,41	
	19	101 34 55,24	0,39	101 34 54,85	7 17,76	7 17,63	—0,13	
	20	101 13 37,89	0.31	101 13 37,58	11 8,35	11 8,67	+0,32	
	21	100 52 5,56	—0,21	100 52 5,35	14 59,08	14 58,47	— 0,61	
	24	99 46 39,58	+0,16	99 46 39,74	26 25,58	26 25,28	—0.30	
	25	99 24 34,42	0,27	99 24 34,69	30 12,85	30 12,42	—0.43	
	26	99 2 16,49	0,39	99 2 16,88	34 0,28	33 59,81	—0,47	
	27	98 39 58,42	0.50	98 39 58,92	37 45.80	37 46,16	+0,36	
	28	98 17 25,31	0,57	98 17 25,88	41 32,00	41 32,06	+0,06	
	29	97 54 48,64	0,63	97 54 49,27	45 17,06	45 17,22	+0,16	
Mar.	1	97 32 3,40	0,65	97 32 4,05	49 1,88	49 2,15	+0.27	
	2	97 9 12,18	0,66	97 9 12,84	52 46.11	52 46,02	—0,09	
	3	96 46 16,18	0,64	96 46 16.82	56 29,65	56 29,69	+0.04	
	4	96 23 10.62	0,59	96 23 11,21	23 0 13,36	0 13,01	—0,35	
	5	99 0 5,74	0,50	96 0 6,24	3 55,67	3 55,67	0,00	
	6	95 36 55,59	0,40	95 36 55,99	7 37.54	7 37,60	+0,06	
	7	95 13 40.00	0.31	95 13 40,31	11 19,27	11 20,16	+0,89	
	8	94 50 15,41	0,18	94 50 15,59	15 1,33	15 1,91	+0,58	
	9	94 26 52,79	+0,06	94 26 52,86	18 42,11	18 42,62	+0,51	
	10	94 3 21,03	—0,05	94 3 20,98	22 23,45	22 23,56	+0,11	
	11	93 39 49,34	0,16	93 39 49,18	26 3,89	26 3,86	—0,03	
	12	93 16 12,32	0,23	93 16 12,09	29 44,59	29 44,36	—0,23	
	13	92 52 38,95	0,30	92 52 38,65	33 24,00	33 24,33	+0.33	
	14	92 28 57,96	0,33	92 28 57,63	37 4.03	37 4.56	+0,53	
	16	91 41 35,63	0,33	91 41 35,30	44 22,58	44 22,73	+0.15	
	17	91 17 53,09	0,28	91 17 52,81	48 1,81	48 1,66	—0,15	
	18	90 54 12,09	0,22	90 54 11,87	51 40,37	51 40,74	+0.37	
	19	90 30 31,33	—0,13	90 30 31,20	55 18,71	55 19,27	+0,56	
	20	90 6 46,88	+0,03	90 6 46,91	58 57,50	58 57.11	—0,39	
	22	89 19 26,96	0,23	89 19 27,19	0 6 13,74	6 14,33	+0,59	
	23	88 55 45.58	0,36	88 55 45,94	9 52,22	9 52.53	+0,31	
	24	88 32 7,26	0,47	88 32 7,73	13 30,47	13 30,13	—0,34	
	25	88 8 31,58	0,57	88 8 32,15	17 8,59	17 8,63	+0,04	
	26	87 44 59,28	0,66	87 44 59,94	20 46,50	20 46,20	—0 30	
	28	86 58 5,42	0,76	86 58 6,18	28 2,10	28 2,61	+0,51	
	29	86 34 41,78	0,76	86 34 42,54	31 40.22	31 40,04	—0,18	
	30	86 11 24,35	0,74	86 11 25,09	35 18.06	35 18,07	+0.01	
	31	85 48 14,09	0,70	85 48 14,79	38 55.50	38 56,02	+0,52	
April	1	85 25 2,72	0.62	85 25 3,34	42 33,93	42 34,32	+0,39	
	2	85 1 56,19	0,53	85 1 56,72	46 12,50	46 12,53	+0.03	
	3	84 39 1,80	0,42	84 39 2,24	49 50,08	49 50,93	+0,85	
	5	83 53 13,11	+0,19	83 53 13,30	57 8,48	57 7,57	—0,91	
	6	83 30 30,82	+0,07	83 30 30,89	1 0 47 51	0 47,01	—0,50	
	7	83 7 57,50	—0,04	83 7 57,46	4 26,38	4 25,77	—0,61	

Digitized by Google

1836.	Observed N. P. D.	Cor.	N P D. corrected for ⊙'s Latitude.	Computed A. R.	Observed A. R·	Error of Eq. Point.	REMARKS.
	° ′ ″	″		h. m. s.	m. s. ″	″	
April 8	82 45 27,54	—0,13	82 45 27,41	1 8 6,03	8 5.59	—0,44	
9	82 23 8,94	0,19	82 23 8,75	11 45,27	11 45,03	—0,24	
10	82 0 55,77	0,24	82 0 55,53	15 25,13	15 24,87	—0,26	
11	81 38 51,77	0,26	81 38 51,51	19 5.07	19 5,31	+0,24	
12	81 16 55,56	0,25	81 16 55,31	22 45,40	22 45.55	+0,15	
13	80 55 9,64	0,21	80 55 9,43	26 26,41	26 26,35	—0,06	
15	80 12 2,37	—0,06	80 12 2,31	33 47,83	33 49,10	+*1,27	obsd. by V.
16	79 50 41.31	+0,04	79 50 41,35	37 29,73	37 30,48	+0,75	——— A.
17	79 29 27,63	0,17	79 29 27,80	41 12,47	41 13,38	+0,91	——— B.
18	79 8 24,31	0,28	79 8 24.59	44 55.60	44 55,39	—0,21	
19	78 47 32,44	0,40	78 47 32,84	48 39,00	48 38,52	—0,48	
1837							
Feb. 13	103 23 19,59	+0,06	103 23 19,65	21 46 58.27	46 57,52	—0,75	
14	103 3 1,25	0,17	103 3 1,42	50 53,07	50 52,04	—1,03	
15	102 42 33,40	0,27	102 42 33.67	54 46,58	54 45,65	—0,93	
16	102 21 56,40	0,34	102 21 56.74	58 38,66	58 39,21	+0,55	
17	102 1 2,63	0,39	102 1 3,02	22 2 31,12	2 31,89	+0,77	
18	101 39 58,03	0,41	101 39 58 44	6 22,74	6 23,08	+0,34	
19	101 18 43,42	0,40	101 18 43.82	10 13,45	10 13,54	+0,09	
20	100 57 14,04	0,38	100 57 14,42	14 4,12	14 3,94	—0,18	
21	100 35 41,40	0,32	100 35 41,72	17 53,19	17 53,19	0,00	
26	98 45 19,56	—0,20	93 45 19,36	36 52,06	36 51,43	—0,63	
27	98 22 50,37	0,31	98 22 50.06	36 38,07	40 37.34	—0,73	
28	98 0 15,85	0,41	98 0 15,44	44 23,20	44 22,94	—0,26	
Mar. 1	97 37 33,63	0,50	97 37 33,13	48 7,92	48 7,99	+0,07	
2	97 14 44,47	0.56	97 14 43,91	52 52,19	52 52,19	0.00	
3	96 51 51,38	0.59	96 51 50,79	55 35,60	55 36,17	+0,57	
4	96 28 46,86	0.59	96 28 46.27	59 19,33	59 19,70	+0,37	
5	96 5 39,77	0,57	96 5 39,20	23 3 2,40	3 2,83	+0,43	
6	95 42 26,66	0,51	95 42 26,15	6 45,06	6 45.61	+0,55	
7	95 19 11,27	0,45	95 19 10.82	10 26,93	10 27.32	+0,39	
8	94 55 52,63	0,36	94 55 52,27	14 8,20	14 9,22	+1,02	
9	94 32 23.38	0,24	94 32 23,14	17 50,26	17 50,52	+0,26	
10	94 8 55.18	0,12	94 8 55,06	21 31,20	21 31,50	+0,30	
11	93 45 20,21	+0,01	93 45 20,22	25 12,39	25 12.64	+0,25	
12	93 21 42,75	0.13	93 21 42,88	25 53,18	28 52,29	—0,89	
13	92 58 9,92	0.24	92 58 10.16	32 32,62	32 32,85	+0.23	
17	91 23 29,01	0,51	91 23 29,52	47 10,01	47 9,35	—0 66	
23	89 1 24.70	0.16	89 1 24,86	0 9 0,11	8 59.74	—0.37	
24	88 37 47,97	0.05	88 37 48 02	12 38,05	12 37,77	—0,28	
25	88 14 12,12	—0,07	88 14 12,05	14 16,14	14 15,17	—0,97	
27	87 27 13,12	0.28	87 27 12.34	23 31,51	23 31.73	+0,22	
28	87 3 45,31	0,38	87 3 44.93	27 9,51	27 8.95	—0.56	
29	86 40 21.81	0,43	86 40 21,38	30 47,47	30 46,71	—0,76	
30	86 17 4.74	0,49	86 17 4.25	34 25.14	34 25,55	+0,41	
31	85 53 47,78	0,49	85 53 47,29	38 3.35	38 3.24	—0,11	
April 1	85 30 33,72	0,47	85 30 33.25	41 42 01	41 41,90	—0,11	
2	85 7 33.40	0.42	85 7 32,98	45 19,34	45 19,99	+0.65	
3	84 44 34,53	0,35	84 44 34,18	48 57.38	48 58.45	+1,07	
7	83 13 21,02	+0.10	83 13 21,12	1 3 33,87	3 33,78	—0,09	
8	82 50 49.49	0.22	82 50 49,71	7 13,38	7 13,40	+0,02	
9	82 28 26.31	0,34	82 28 26,64	10 52.99	10 52,96	—0.03	

* Omitted in taking the Mean.

Digitized by Google

1837.	Observed N. P. D.	Cor.	N. P. D. corrected for ☉'s Latitude.	Computed A. R.	Observed A. R.	Error of Eq. Point.	REMARKS.
	° ′ ″	″		h. m. s.	m. s.	″	
April. 11	81 44 5,52	+0,52	81 44 6,04	1 18 12,58	18 12,83	+0,25	
12	81 22 6,05	0,60	81 22 6,65	21 53,01	21 52,92	—0,09	
13	81 0 17,62	0,62	81 0 18,24	25 33,35	25 33,83	+0,48	
14	80 38 38,25	0,63	80 38 38,88	29 15,97	29 15,06	—0,91	
15	80 17 4,54	0,61	80 17 5,15	32 55,59	32 55,94	+0,35	
17	79 34 33,32	0,50	79 34 33,82	40 18,61	40 19,31	+0,70	
18	79 13 25,28	0,40	79 13 25,68	44 2,07	44 2,02	—0,05	

Observations of the Sun made near to the Autumnal Equinoxes of 1836 *and* 1837 *applied to the determination of the error of the Equinoctial Point.*

1836.	Observed N. P. D.	Cor.	N. P. D. corrected for ☉'s Latiude.	Computed A. R.	Observed A. R.	Error of Eq. Point.	REMARKS.
	° ′ ″	″		h. m. s.	m. s.	″	
Sep. 9	84 41 43,17	+0,53	84 41 43,70	11 10 35,56	10 34,77	—0,79	
11	85 27 14,99	0,40	85 27 15,39	17 46,81	17 46,79	—0,02	
12	85 50 11,29	0,31	85 50 11,60	21 22,82	21 22,28	—0.54	
16	87 22 31,57	—0,18	87 22 31,39	35 45,01	35 44,70	—0,31	
20	88 55 36,69	—0,53	88 55 36,16	50 6,27	50 6,42	+0,15	
21	89 18 59,54	0,56	89 18 58,98	53 41,93	53 42,03	+0,10	
22	89 42 24,65	0,57	89 42 24,08	57 17,81	57 17,44	—0,37	
25	90 52 32,54	0,41	90 52 32.13	12 8 4,39	8 4,59	+0,20	
26	91 16 2,37	0,32	91 16 2,05	11 41,13	11 40,99	—0,14	
29	92 26 12,20	+0,04	92 26 12,24	22 30,37	22 30,75	+0.38	
Oct. 4	94 22 40,39	0,43	94 22 40,82	40 38.39	40 38,40	+0,01	
6	95 9 0,74	0,43	95 9 1,17	47 56,48	47 56,08	—0,40	
8	95 55 2,68	0,31	95 55 2.99	55 15,79	55 15,20	—0,59	
9	96 17 54,45	0,22	96 17 54,67	58 55,67	58 55,83	+0,16	
10	96 40 45,03	0,11	96 40 45,14	13 2 36,62	2 36,57	—0,05	
11	97 3 23,18	—0,01	97 3 23,17	6 16,89	6 17,78	+0,89	
12	97 26 2,62	0,14	97 26 2,48	9 58,79	9 59,67	+0,88	
13	97 48 36,53	0,27	97 48 36,26	13 41,29	13 41,89	+0,60	
14	98 10 59,48	0.38	98 10 59.10	17 23,59	17 23,97	+0,38	
18	99 39 33,70	0.66	99 39 33,04	32 20.94	32 20,80	—0,14	
19	100 1 19.10	0,67	100 1 18.43	36 6 31	36 6,33	+0,02	
20	100 23 0,87	0,65	100 23 0,22	39 53,11	39 52,70	—0.41	
21	100 44 25,38	0,60	100 44 24,78	43 39,20	43 39,34	+0,14	
22	101 5 44,16	0,52	101 5 43.64	47 26,63	47 27.01	+0,38	
25	102 8 38,39	0,21	102 8 38,18	58 52,98	58 53,74	+0,76	
1837							
Sep. 9	84 36 11,18	—0,30	84 36 10,88	11 9 42,80	9 43,18	+0,38	
12	85 44 40.46	0.29	85 44 40,17	20 30.93	20 30,11	—0.82	
13	86 7 32,11	0,24	86 7 31,87	24 5,57	24 5,72	+0,15	
14	86 30 36,22	0 16	86 30 36.06	27 41,45	27 41,20	—0,25	
15	86 53 37.86	0,06	86 53 37,80	31 16,29	31 16,69	+0.40	
16	87 16 48 83	+0,05	87 16 48,88	34 51,99	34 51.78	—0,21	
17	87 39 55,75	0,17	87 39 55,92	38 26.56	38 27,60	+1,04	
18	88 3 11,53	0.28	88 3 11,81	42 2,07	42 2,70	+0.63	
19	88 26 31.04	0.39	88 26 31,43	45 37,78	45 37,76	—0,02	
20	88 49 51,21	0.50	88 49 51,71	49 13.30	49 13,46	+0,16	

Digitized by Google

1837.	Observed N. P. D.	Cor.	N. P. D. corrected for ⊙'s Latitude.	Computed A. R.	Observed A. R.	Error of Eq. Point.	REMARKS.
	° ′ ″	″		h. m. s.	m s. ″	″	
Sep. 21	89 13 14,71	+0,57	89 13 15,28	11 52 49,11	52 48,59	—0,52	
22	89 36 39,94	0,63	89 36 40,57	56 25,10	56 24,38	—0,72	
23	90 0 2,65	0,66	90 0 3,31	12 0 0,69	0 0,02	—0,67	
24	90 23 29,99	0,66	90 23 30,65	3 36,68	3 35,65	—1,03	
25	90 46 51,60	0,64	90 46 52,24	7 12,02	7 12,08	+0,06	
26	91 10 17,76	0,59	91 10 18,35	10 48,24	10 48,25	+0,01	
27	91 33 41,44	0,51	91 33 41,95	14 24,28	14 24,73	+0,45	
28	91 57 11,49	0,42	91 57 11,91	18 2,09	18 1,04	—1,05	
Oct. 10	96 35 18,17	—0,39	96 35 17,78	13 1 43,67	1 43,52	—0,15	
12	97 20 41,73	0,22	97 20 41,51	9 6,19	9 6,76	+0,57	
13	97 43 5,97	0,11	97 43 5,86	12 46,76	12 47,81	+1,05	
14	98 5 34,99	0,00	98 5 34,99	16 29,71	16 30,42	+0,71	
16	98 50 4,12	+0,23	98 50 4,35	23 55,86	23 56,83	+0,97	

Taking the means and refering to former Vols. we have determined altogether as follows—

ERROR OF THE ASSUMED EQUINOCTIAL POINT.

	Observations in Spring.		*Observatians in Autumn.*
	s		s
from 19 observations in 1831	+0,055	from 17 observations in 1831	+0,267
—— 50 ———— 1832	— ,140	—— 48 ———— 1832	,399
—— 48 ———— 1833	— ,046	—— 29 ———— 1833	,325
—— 56 ———— 1835	+ ,392	—— 29 ———— 1835	,376
—— 59 ———— 1836	+ ,003	—— 25 ———— 1836	,052
—— 45 ———— 1837	— ,001	—— 23 ———— 1837	,050

In Vol. III, I had proposed to reject the result derived from the Spring Observations of 1835; but the results from the Autumnal Observations of 1836 and 1837, when compared with former results, exhibiting a similarly large discordance, it would appear preferable to retain it; accordingly we have

Error of the assumed Equinoctial Point.

s
From the Observations in Spring +0,043
—— —— —— Autumn +0,245

∴ MEAN ERROR OF THE ASSUMED EQUINOCTIAL POINT +0,144

The results here obtained from the Observations at the Vernal and Autumnal Equinoxes, as well as those arrived at for the Obliquity, at page 68, exhibit a discordance, such as would be explained by attributing an error to the assumed place of the pole (the Latitude in fact); to understand this matter clearly, it is necessary to recollect, that every measure of North Polar Distance which is contained in this andthe previous volumes of the Madras Results, has been derived from the Greenwich Catalogue of 720 Stars for 1825; which catalogue reckoned the N. P. D. from a point (supposed to be the pole) situated at an altitude of 51° 28′ 38″,5 above the north horizon of the Greenwich Royal Ob-

Digitized by Google

servatory; hence, the error (if any) of this assumption, necessarily affects by its whole amount, the N. P. D. of every Star of the above catalogue, and consequently each and every measure of N. P. D. which has been made at Madras: thus, to render the Solsticial Observations at Madras accordant, we must diminish the Latitude of Greenwich 1″,65; and to reconcile the Observations at the Equinoxes, we must diminish the Latitude 0″,66,—rendering it exceedingly probable, that the Latitude of Greenwich as above stated, must be diminished by about one second.*

The presumed Latitude of Greenwich	51° 28′ 37″,5
In vol. I. Difference of Latitude of Madras and Greenwich.	38 24 29 ,3
Latitude of Madras ..	13 4 8 ,2

OBSERVATION OF SPOTS UPON THE SUN'S DISC.

The following observations of the various spots which have from time to time passed over the Sun's disc—have been made at the time of Transit with the Meridianal Instruments, so as not to prevent the ordinary observation of the Limb; at the Transit, one or two wires have mostly been taken; and at the Mural Circle, only two Microscopes could be read off; they are however on the whole, I apprehend—little inferior to the other observations.

Apparent Right Ascension and Declination of Spots observed upon the Sun's Disc, together with their Geocentric and Heliocentric Places.

Madras M. T.	Apparent A. R.	Apparent Decn.	Geocentric Longitude.	Geocentric Latitude.	Heliocentric Longitude.	Heliocentric Latitude.
1835 D. h. m.	h. m. s.	° ′ ″	° ′ ″	′ ″	° ′ ″	° ′ ″
Dec. 23 23 59,5	(1) 18 8 8.25	—23 22 8,5	271 52 3,3	+4 46,6	76 17 31	+17 5 13
25 0 0,0	(1) 12 19,41	23 20 32,8	272 49 42,6	+5 21,1	90 41 45	18 55 3
26 0 0,5	(1) 16 29.93	23 18 39,0	273 47 15,0	+5 49,2	105 28 40	21 0 53
27 0 1,0	(1) 20 41,78	23 16 18,5	274 45 7,7	+6 16,7	119 27 38	22 45 25
29 0 2,0	(1) 29 10,78	23 10 50,9	276 42 11,3	+6 40,8	149 16 33	24 18 17
30 0 2,5	(1) 33 28,37	23 7 34,2	277 41 29,3	+6 44,3	163 52 17	24 32 11
1836						
Jan. 4 0 4,9	18 55 39,23	22 41 52,0	282 49 1,5	—8 48.0	157 8 8	—25 37 28
8 0 6,7	(5) 19 13 31,72	22 28 43,1	287 1 4,2	—6 6,9	142 22 0	—22 8 45
20 0 11,1	20 5 12,24	20 13 20,5	299 10 37,1	+7 20,6	175 23 23	+26 56 18
21 0 11,4	9 16,36	20 0 14,7	300 9 24,2	+8 7,2	170 58 33	+30 5 10
23 0 12,0	(1) 18 10,58	19 33 55,3	302 17 47,2	+6 14,3	140 3 54	+22 38 37

* In Vol. II. page 84, I had arrived at very nearly the same result,—a result which has lately been completely verified by the observations at Greenwich.

Digitized by Google

Madras M. T.			Apparent A. R.	Apparent Decn.	Geocentric		Heliocentric	
					Longitude.	Latitude.	Longitude.	Latitude.
1836 D.	h. m.		h. m. s.	° ′ ″	° ′ ″	′ ″	° ′ ″	° ′ ″
Jan. 26	0 12,7	(1)	20 30 10,22	—18 52 56,0	305 12 32,2	+6 17,2	184 17 34	+22 51 18
31	0 13,7	(2)	51 57,69	17 39 49,4	310 31 15,8	—2 54,0	125 44 24	—10 19 10
Feb. 1	0 13,8	(2)	55 49,54	17 24 47,5	311 28 32,2	3 35,3	139 56 58	—12 48 41
2	0 13,9	(2)	59 40,58	17 8 48,3	312 25 57,2	3 36,5	153 51 56	—12 52 58
3	0 14,0	(2)	21 3 32,39	16 52 33,5	313 23 42,6	3 47,5	168 0 17	—13 32 94
4	0 14,2	(2)	7 24,72	16 35 53,6	314 21 46,2	3 48,5	182 6 38	—13 36 58
5	0 14,3	(2)	11 19,86	16 18 54,9	315 20 39,0	4 5,1	195 37 59	—14 37 37
8	0 14,5	(5)	23 19,76	15 25 44,2	318 21 44,5	5 39,2	213 59 0	—20 28 49
9	0 14,5	(5)	27 17,16	15 6 48,9	319 22 2,3	5 28,0	223 1 41	—19 47 2
15	0 14,5		51 29,27	13 1 51,8	325 35 38,0	1 53,7	165 2 42	— 6 44 15
16	0 14,4	(3)	55 57,15	12 41 33,2	326 43 56,5	4 56,1	137 54 9	—17 48 18
17	0 14,4	(3)	59 36,70	12 21 48,2	327 41 2,8	4 45,1	151 39 21	—17 7 44
18	0 14,3	(3)	22 3 16,50	12 1 59,5	328 38 17,4	4 45,6	164 56 46	—17 9 25
19	0 14,2	(3)	6 56,16	11 42 3,1	329 35 23,7	5 25,1	179 51 22	—19 37 52
20	0 14,1	(3)	10 37,05	11 21 51,7	330 33 22,0	5 18,8	192 40 54	—19 14 26
24	0 13,6	(2)	27 15,96	9 46 9,4	334 56 50,7	4 4,2	105 28 26	—14 37 59
26	0 13,3	(2)	34 28,53	9 3 3,8	336 51 54,1	3 18,6	133 8 39	—11 51 51
27	0 13,2	(2)	38 2,19	8 41 37,9	337 48 51,9	3 2,6	146 38 47	—10 53 41
29	0 12,8	(4)	45 40,84	7 57 10,5	339 50 42,5	4 24,1	143 46 50	—15 53 30
Mar. 1	0 12,6	(4)	49 13,23	7 35 29,9	340 47 36,3	4 14,5	156 14 21	—15 17 14
3	0 12,2	(4)	56 16,06	6 52 19,0	342 41 2,4	4 17,1	183 13 53	—15 27 16
7	0 11,2	( )	23 10 53,40	5 19 2,0	346 38 12,7	2 26,0	198 7 27	— 8 42 45
8	0 11,0	( )	14 24,77	4 57 13,3	347 35 10,8	2 51,2	213 13 35	—10 14 21
10	0 10,5		21 34,14	4 8 2,7	349 32 53,8	+0 30,6	225 1 43	+ 1 49 8
31	0 4,3	(6)	39 38,70	4 14 6,5	10 46 11,2	—2 3,6	148 5 47	— 7 22 50
April 1	0 3,9	(6)	43 5,09	4 36 8,8	11 42 9,3	—1 55,9	163 14 15	— 6 57 12
2	0 3,6	(6)	46 31,01	4 56 46,8	12 37 48,8	—2 3,7	177 12 57	— 7 23 40
3	0 3,3	(6)	49 54,35	5 19 14,7	13 32 49,2	—1 59,3	193 14 40	— 7 11 11
4	0 3,0		53 42,99	5 40 30,7	14 33 31,0	—4 28,2	188 24 50	—16 17 49
5	0 2,7		57 14,08	6 38,0	15 30 5,7	—5 17,0	193 41 55	—19 22 0
7	0 2,2	(9)	1 3 55,17	6 55 46,1	17 22 52,6	+6 24,4	219 52 56	+23 43 32
8	0 1,9	(8)	7 10,21	7 13 35,0	18 14 24,2	+4 23,2	256 59 58	+16 0 6
9	0 1,6	(6)	10 54,29	7 27 24,8	19 11 3,2	—3 56,7	279 50 57	—14 21 35
14	0 0,3		30 51,91	9 26 35,2	24 20 3,7	+0 1,8	204 17 5	+ 0 6 79
15	0 0,0		34 22,89	9 58 40,0	25 30 23,4	+6 49,0	151 5 47	+25 24 49
22	23 58,7		2 3 1,36	+12 34 13,2	32 59 26,3	+3 10,0	242 13 58	+11 32 56
30	23 56,9	(6)	33 50,58	15 3 56,9	40 52 35,8	—2 22,1	219 49 55	— 8 36 30
May 1	23 56,8	(8)	37 25,94	15 27 . 4,4	41 49 9,0	+3 31,7	227 8 48	+12 53 12
Sep. 25	23 51,3	(7)	12 12 14,74	— 1 15 57,0	183 18 43,5	+3 25,0	333 27 44	+12 23 23
27	23 50,7	(7)	19 27,35	2 0 39,0	185 10 10,0	+2 56,7	0 11 0	+10 38 57
28	23 50,3	(7)	22 28,06	2 22 36,3	186 5 50,1	+3 4,7	13 43 30	+11 7 57
29	23 50,0	(7)	25 53,17	2 45 13,5	187 1 42,3	+2 53,7	25 7 24	+10 27 12
Oct. 11	23 46,5	(9)	13 10 38,49	7 21 1,1	199 6 8,2	+5 36,2	346 12 8	+20 31 1
13	23 46,1		17 44,67	8 4 6,7	200 59 1,9	+8 20,4	11 53 36	+31 24 7

The numbers (1), (2), &c. are supplied—to shew when the same spot has been re-observed: If we compare the cases in which the same spot has been re-observed after a complete revolution, we determine approximately.

from No. 1, that the Sun rotates on his axis at the rate of 14° 2′ in 24 hours.
—— 2, —— —— —— —— —— —— —— 14 6 —— ——
—— 6, —— —— —— —— —— —— —— 13 48 —— ——
—— 9, —— —— —— —— —— —— —— 14 4½ —— ——

Digitized by Google

The observation on the 30th April, shews that the position of the spot had shifted 6 or 7 degrees (apparently 1′ 50″), or that another spot had sprung up in its neighbourhood; and the observation of No. 1 on the 29th of December and 23rd January, shews a variation of 2 degrees in the Heliocentric Latitude:* the observation of No. 9, which embracing 7 revolutions, should be a good one,—seems to confirm 1 and 2 in giving a rate of rotation of 14° 4′ a day; or it would appear, that the Sun makes one complete *sidereal revolution* on his axis in 25 days 14 hours. With regard to the position of the Solar Axis, the above observations are sufficient only to furnish a rude approximation: it would appear that the inclination of the Solar Axis to the Pole of the Ecliptic is between 6 and 7 degrees; and that the Heliocentric Longitude of the intersection of the Solar Equator with the Plane of the Ecliptic is about 95°.

Observed Right Ascension and North Polar Distance of MERCURY, *compared with the places interpolated from the Nautical Almanac.*

1836.		Madras. Time of Observation.	A. R. from Observatioon.	A. R. from N. A.	Error of N. A.	N. P. D. from Observation.	N. P. D. from N. A.	Error of N. A.	REMARKS.
		h. m. s.	h. m. s.	″	″	° ′ ″	° ″	″	
Jan.	16	0 38 20,1	20 17 25,55	24,95	—0,60	———	——	——	
	19	0 47 45,8	20 38 42,64	42,34	—0,30	110 33 15,93	33 8,44	—7,49	
	21	53 52,8	20 52 43,47	43,11	—0,36	109 33 26,60	33 17,43	—9,17	faint.
	22	56 51,2	59 38,76	38,92	+0,16	109 0 58,46	1 3,30	+4,84	
	23	59 46,1	21 6 30,87	30,92	+0,05	108 27 22,78	27 23,91	+1,13	
	26	1 8 0,9	26 36,64	36,68	+0,04	106 38 29,92	38 29,62	—0,30	
	27	10 33,1	21 33 6,08	5,68	—0,40	105 59 53,09	59 50,46	—2,63	
	29	15 12,3	45 37,90	37,54	—0,36	104 39 48,95	39 48,64	—0,31	
Feb.	2	22 2,0	22 8 15,89	15,45	—0,44	101 53 47,26	53 46,75	—0,51	
	3	23 3,4	13 14,11	13,80	—0,31	101 12 34,70	12 31,82	—2,88	
	4	23 44,1	17 51,54	51,41	—0,13	100 32 3,79	32 0,13	—3,66	
	5	24 2,1	22 6,29	5,77	—0,52	99 52 41,58	52 33,93	—7,65	
	6	23 54,0	25 54,92	54,59	—0,33	99 14 39,06	14 38,77	—0,29	
	8	22 12,1	32 5,70	5,23	—0,47	98 4 53,09	4 54,61	+1,52	
	9	20 33,2	34 23,30	22,46	—0,84	97 33 59,29	33 59,28	—0,01	
	10	18 18,9	36 5,58	4,97	—0,61	97 6 16,34	6 16,00	—0,34	
April	13	23 0 51,3	0 30 33,76	33,83	+0,07	89 10 43,41	10 51,63	+8,22	
	14	23 3 20,0	0 36 59,40	59,05	—0,35	———	——	——	
	18	14 14,9	1 3 42,17	41,89	—0,28	85 14 16,18	14 22,09	+5,91	
	22	26 52,9	32 8,57	8,65	+0,08	81 52 3,19	52 4,70	+1,51	
	24	34 4,8	47 4,50	4,65	+0,15	80 8 17,06	8 13,18	—3,88	
	25	37 36,2	54 43,84	43,83	—0,01	———	——	——	
May	31	1 38 53,7	6 14 20,44	20,31	—0,13	64 53 2,75	53 1,61	—1,14	

* In case these spots are not situated upon the illuminated *surface* of the Sun, some part of the discrepancy here found may be explained; but the observation of the Solar spots, are, by reason of their varied figure—so subject to inaccuracy, that nothing conclusive with regard to their situation or movements, can be expected from the above few observations.

Digitized by Google

1836.	Madras Mean Time of Observation.	A. R. from Observation.	A. R. from N. A.	Error of N. A.	N. P. D. from Observation.	N. P. D. from N. A.	Error of N. A.	REMARKS.
	h. m. s.	h. m. s.	"	"	° ′ "	′ "	"	
July. 19	22 39 39,7	6 31 45,13	45,09	—0,04	68 47 2,94	47 7,34	+4,40	
Oct. 6	1 12 29,4	14 12 30,79	30,65	—0,14	———	——	——	
Nov. 22	22 56 34,1	15 5 28,70	28,36	—0,34	106 19 48,47	19 53,30	+4,83	
25	23 3 16,4	15 24 0,09	59,94	—0,15	107 53 51,48	53 55,13	+3,65	
Dec. 4	25 30,1	21 46,49	46,01	—0,48	111 52 12,85	52 13,01	+0,16	
1837								
Jan. 3	0 52 57,2	19 43 49,04	48,91	—0,13	113 28 46,37	28 48,98	+2,61	
7	1 4 49,2	20 11 29,49	29,35	—0,14	112 3 31,31	3 30,45	—0,86	
8	7 36,8	18 14,01	14,22	+0,21	111 38 24,05	38 26,14	+2,09	
9	10 18,5	24 52,57	52,29	—0,28	111 11 55 61	11 56,14	+0,53	
10	12 53,0	31 24,32	23,99	—0,33	110 44 4,91	44 5,02	+0,11	
24	21 29,0	21 35 13,50	12,82	—0,68	103 25 22,54	25 20,50	—2,04	
Feb. 19	22 37 21,1	20 37 5,09	4,27	—0,82	———	——	——	invisibleto the Circle observer.
20	35 6,7	38 47,81	47,24	—0,57	107 1 14,05	1 18,11	+4,06	
Mar. 1	28 11,6	21 7 20,03	19,78	—0,25	106 52 16,56	52 18,07	+1,51	
5	30 16,7	25 12,03	11,12	—0,91	106 9 41,18	9 48,84	+7,66	
6	31 6,9	29 59,02	58,73	—0,29	105 55 34,62	55 38,74	+4,12	
7	32 5,5	34 53,34	53,08	—0,26	105 40 1,87	40 5,19	+3,32	
8	33 8,8	39 54,01	53,62	—0,39	105 23 5,94	23 8,58	+2,64	
9	34 19,0	45 0,38	0,10	—0,28	105 4 47,76	4 49,95	+2,19	
10	35 33,3	50 12,39	11,70	—0,69	104 45 7,91	45 10,10	+2,19	
13	39 47,2	22 6 16,13	15,80	—0,33	103 38 0,91	38 8,71	+7,80	
16	44 39,2	22 58,39	58,36	—0,03	102 19 16,47	19 19,42	+2,95	
22	56 0,1	57 59,51	59,29	—0,22	99 7 21,77	7 26,26	+4,49	
23	58 3,8	23 4 1,64	1,29	—0,35	98 30 59,89	31 8,69	+8,80	
24	23 0 12,5	10 6,59	6,65	+0,06	———	——	——	
26	4 41,6	22 28,21	27,66	—0,55	96 35 3,11	35 6,14	+3,03	
27	6 57,3	28 42,92	43,39	+0,47	95 54 2,12	54 4,68	+2,56	
28	9 19,9	35 2,34	2,50	+0,16	95 11 56,44	11 54,40	—2,04	
29	11 47,6	41 25,93	25,69	—0,24	94 28 40,79	28 36,44	—4,35	
30	14 16,6	47 52,60	52,58	—0,02	93 42 7,86	44 11,98	+4,12	
April 19	0 16 43,8	2 5 24.23	24,26	+0,03	———	——	——	
20	20 46,6	13 24,54	24 32	—0,22	76 19 5,37	19 5,60	+0,23	
21	24 51,2	21 26,19	26,18	—0.01	75 26 59,47	26 55,29	—4,18	
25	41 6,4	53 30,57	30,67	+0,10	72 12 54,94	12 53.15	—1,79	
26	43 3,8	3 1 25,05	24.71	—0,34	71 29 1,52	29 3,08	+1,56	
30	51 51,0	32 1,78	2 11	+0,33	68 56 13,28	56 11,70	—1,58	
May 2	1 6 23,8	46 27,64	27,70	+0,06	67 54 34,49	54 32,82	—1,67	
3	9 22,5	53 23,70	23,84	+0.14	67 27 34,07	27 30,03	—4,04	
11	24 55,9	4 40 32,16	32,38	+0,22	65 7 46,01	17 44,34	—1,67	
12	25 41,1	4 45 14,94	15,03	+0,09	65 11 29,12	11 26,54	—2,58	
July 9	22 44 11 4	5 55 54,24	54,86	+0,62	———	——	——	
11	22 50 26,4	6 10 3,54	4,12	+0,58	67 19 10,45	19 11,77	+1,32	
18	23 20 7,0	7 7 25,62	25,38	—0,24	66 49 6,65	49 7,74	+1,09	
19	23 25 0,3	7 16 19,23	19 72	+0,49	———	——	——	
Aug. 7	0 46 38,3	9 49 5,48	6,04	+0,56	———	——	——	invisibleto the Circle observer.
9	0 53 1,4	10 3 22,51	22,81	+0,30	76 27 28,78	27 32,40	+3,62	
28	1 28 33,4	11 53 54,96	54,87	—0.09	90 6 48,28	6 34,25	—4,03	
Sep. 13	28 37,0	12 57 3,46	3,34	—0,12	———	——	——	
20	15 7,2	13 11 7,39	7,04	—0,35	101 30 15,89	30 18,03	+2,14	
21	12 3,8	11 59.81	59.52	—0,29	101 39 19,31	39 21,41	+2,10	
22	8 39,8	12 31,71	31,26	—0 45	101 45 19,56	45 22,98	+3 42	
23	5 39,4	12 41,05	40,16	—0,89	101 48 6,56	48 7,98	+1,42	

Digitized by Google

Observed Right Ascension and North Polar Distance of VENUS, *compared with the places interpolated from the Nautical Almanac.*

1836.	Madras Mean Time of Observation.	A. R. from Observation.	A. R. from N. A.	Error of N. A.	N. P. D. from Observation.	N.P.D. from N. A.	Error of N. A.	REMARKS.
	h m s.	h. m. s.		"	° ′ ″	″	″	
Jan. 4	1 40 36,9	20 32 33,75	33,38	—0,37	110 29 18,27	14,20	— 4,07	
7	44 12,6	47 59,41	59.49	+0,08	109 33 17,28	12,44	— 4,84	
8	45 22,0	53 5,58	5,48	—0,10	109 13 27,65	24,00	— 3,65	
16	53 47,2	21 33 5,09	4,89	—0,20	106 16 23,19	21,53	— 1,66	
19	56 34,6	47 42,64	42,47	—0,17	105 2 25,68	17,75	— 7,93	
20	57 27,6	52 32,27	32,39	+0,12	104 36 51,04	47,18	— 3,86	
21	58 20,0	57 21,48	21,01	—0,47	104 10 51,89	53,26	+ 1,37	
22	59 9,9	22 2 7,82	8,38	+0.56	103 44 34,62	36,51	+ 1,89	
23	59 59,7	6 54,39	54,51	+0,12	103 17 59,75	58,10	— 1,65	
25	2 1 35,1	16 23,00	23,06	+0,06	102 23 40,78	39,50	— 1,28	
26	2 20,9	21 5,49	5,60	+0,11	101 56 2,01	0,70	— 1,31	
28	3 49,4	30 27,20	26,86	—0,34	100 59 49,49	48,04	— 1,45	
29	4 31,5	35 6,25	5,86	—0,39	100 31 19,69	16,03	— 3,66	
Feb. 2	7 10,3	53 32,57	32,39	—0,18	98 34 33,01	34,73	+ 1,72	
3	7 48,2	58 6,26	6,60	+0,34	98 4 48,52	49,90	+ 1,38	
4	8 25,0	23 2 39,89	39,78	—0,11	97 34 51,72	52,91	+ 1,19	
5	9 0,6	7 12,25	12,16	—0,09	97 4 45,74	44,13	— 1,61	
6	9 35,5	11 43,88	43,72	—0,16	96 34 26,82	24,72	— 2,10	
8	10 43,1	20 24,61	24,63	+0,02	95 33 21,26	16,75	— 4,51	
9	11 15,9	25 14,25	14,03	—0,22	95 2 37,72	30,44	— 7,28	
July 31	23 20 5,7	7 59 34,83	35,17	+0.34	——	——	——	
Sep. 9	21 5 27,8	22 15,69	15,65	—0,04	74 48 24,60	13,06	—11,54	
12	2 36,4	31 14.47	14,83	+0,36	74 56 36,90	26.73	—10,17	
20	20 57 33,9	8 57 44,39	44,21	—0,18	75 38 44,87	36,74	— 8,13	
Oct. 3	20 54 50,7	9 46 16,22	16,16	—0,06	77 52 44,79	42,15	— 2,64	
Nov. 25	21 9 40,0	13 30 5,47	5,03	—0,44	97 13 36,36	35,56	— 0,80	
Dec. 1	13 12,8	57 17,26	16.68	—0,58	99 44 53,99	52,74	— 1,25	
5	15 51,8	14 15 44,15	43,60	—0,55	101 22 49,65	50,25	+ 0,60	
6	16 33,7	20 23,38	22,87	—0,51	101 46 48,75	50,21	+ 1,46	
19	27 29,1	15 22 36,33	35,96	—0,37	106 33 37,93	38,03	+ 0,10	
1837.								
Jan. 2	21 43 0,4	16 33 20,37	19,96	—0,41	110 27 13,29	13,19	— 0,10	
19	22 5 59,5	18 3 25,93	25,13	—0,80	112 41 24,05	30,49	+ 6,44	
Feb. 3	27 24,0	19 24 2,33	1,82	—0,51	111 59 44,08	47,71	+ 3,63	
5	30 9,4	34 41,47	40,89	—0,58	111 42 36,87	43,17	+ 6,30	
6	31 42,4	39 59,78	59,48	—0,30	111 33 5,82	11,83	+ 6,01	
7	32 51,8	45 17,64	17,01	—0,63	111 22 55,20	61,78	+ 6,58	
8	22 34 13,1	19 50 34,46	34,30	—0,16	111 12 6,97	13,17	+ 6,20	
9	35 32,3	55 50,99	50,52	—0,47	111 0 42.45	46,77	+ 4,32	
10	36 51,7	20 1 6,34	5,91	—0,43	110 48 42,37	42,56	+ 0,19	
17	45 33,9	37 28,03	27,18	—0,85	109 7 20,18	25,18	+ 5,00	
19	47 56,0	47 41,74	41,29	—0,45	108 33 14,10	20,44	+ 6,34	
20	49 3,5	52 46,87	46,38	—0,49	108 15 24,82	30,94	+ 6,12	
26	55 32,7	21 22 55,79	55,74	—0,05	106 17 43,98	49,02	+ 5,04	
Mar. 1	58 30,1	37 45,51	45,35	—0,16	105 12 37,33	38,12	+ 0,79	
5	23 2 16,2	57 16,83	16,26	—0,57	103 39 46,00	52,31	+ 6,31	
7	4 2,5	22 6 55,58	55,36	—0,22	102 51 4,85	12,00	+ 7,15	
8	4 55,1	11 43,45	43,33	—0,12	102 26 16,34	20,00	+ 3,66	
9	5 44,2	16 30,73	30,37	—0,36	102 1 5,07	7,88	+ 2,81	
10	6 32,7	21 16,90	16,37	—0,53	101 35 31,35	36,21	+ 4,86	

Digitized by Google

1837.		Madras Mean Time of Observation.	A. R. from Observation.	A. R. from N. A.	Error of N. A.	N. P. D. from Observation.	N. P. D. from N. A.	Error of N. A.	REMARKS.
		h. m. s.	h. m. s.	"	"	° ' "	"	"	
Mar.	13	23 8 54,4	22 35 29,07	28,80	—0,27	100 17 12,26	10,08	—2,18	
	15	10 21,7	44 53,00	53,07	+0,07	99 23 32,11	32,34	+0,23	
	16	11 10,1	49 33,56	33,41	—0,15	98 56 16,86	19,42	+2,56	
	19	13 17,8	23 3 31,62	30,95	—0,67	97 33 14,68	16,66	+1,98	
	20	13 58,9	8 8,96	8,68	—0,28	97 5 11,93	11,88	—0,05	
	21	14 40,0	12 46,22	45,85	—0,37	96 36 54,43	54,56	+0,13	
	22	15 18,3	23 17 22,43	21,89	—0,54	96 8 25,93	26,53	+0,60	
	23	15 57,7	21 58,49	58,32	—0,17	95 39 49,93	48,49	—1,44	
	24	16 36,9	26 33,67	33,74	+0,07	95 11 4,71	0,90	—3,81	
	26	17 54,5	23 35 43,67	43,42	—0,25	94 13 1,03	0,43	—0,60	
	27	18 29,4	40 16,82	17,29	+0,47	93 43 47,49	49,03	+1,54	Clock error doubtful.
	28	19 6,7	44 50,68	50,30	—0,38	93 14 29,68	32,12	+2,44	
	29	19 44,9	49 24,55	24,41	—0,14	92 45 6,70	7,28	+0,58	
	30	20 20,5	53 57,48	57,73	+0,25	92 15 39,89	38,37	—1,52	
April	1	21 32,6	0 3 3,08	3,01	—0,07	91 16 28,63	28,33	—0,30	
	7	25 6,7	30 16,31	16,33	+0,02	81 18 10,83	11,70	+0.87	
	11	27 29,3	0 48 25,72	26,05	+0,33	86 19 41,45	37,74	—3,71	
	12	28 6,2	52 59,10	58,90	—0,20	85 0 14,08	8,14	—5,94	
	13	28 41,6	57 32,25	32,02	—0,23	85 20 49,05	43,76	—5,29	
	14	29 18,5	1 2 5,36	5,44	+0,08	84 51 31,81	25,02	—6,79	
	17	31 11,8	15 48,06	48,07	+0,01	83 24 10,95	10,08	—0,87	
	19	32 29,0	24 58,45	58,48	+0,03	82 6 44,79	41,57	—3,22	
	20	33 7,6	29 34,25	34,56	+0,31	81 58 16,88	10,88	—6,00	
	21	33 47,8	34 10,61	11,10	+0,49	81 29 58,89	52,85	—6,04	
	23	35 9,8	43 26,46	26,52	+0,06	80 33 57,34	50,32	—7,02	
	24	35 50,6	48 5,07	5,16	+0,09	80 6 15,85	6,35	—9,50	
	25	36 34,0	52 44,27	44,43	+0,16	79 38 45,66	36,83	—8,83	
	26	37 17,8	57 24,42	24,73	+0,31	79 11 26,27	21,56	—4,71	
	27	38 2,2	2 2 5,54	5,71	+0,17	78 44 23,58	21,36	—2,22	
May	1	41 8,1	20 58,12	58,10	—0,02	——	——	——	
	3	42 45,8	2 30 29,33	29,84	+0,51	——	——	——	
June	2	0 14 32,5	4 56 40,89	40,91	+0,02	67 11 28,23	24,79	—3,44	
	5	18 37,3	5 12 36,00	36,04	+0,04	66 43 15.86	14,16	—1,70	
	6	20 1,2	17 55,78	55,85	+0,07	66 35 11,23	11,11	—0,12	
	9	24 12,5	33 58,77	58,48	—0,29	66 15 9,93	8,88	—1,05	
	11	27 2,9	44 42,86	42,42	—0,44	66 5 16,99	16,78	—0,21	
	12	28 28,7	50 5,02	4,88	—0,14	66 1 25,45	24,08	—1,37	
	13	29 54,4	55 27,50	27,77	+0,27	65 58 14,69	13,86	—0,83	
	14	31 20,6	6 0 50,32	50,74	+0,42	65 55 46,69	46,37	—0,32	
	16	34 13,3	11 37,21	37,13	—0,08	65 53 0,14	0,04	—0,10	
	17	34 39,8	16 59,88	0,13	+0,25	65 52 42,35	41,28	—1,07	
	18	37 6,7	22 23,88	23,57	—0,31	65 53 5,23	5,49	+0,26	
	25	47 5,5	7 0 0,15	0,52	+0,37	66 15 56,65	56,25	—0,40	
July	9	1 5 36,0	8 13 45,45	45,60	+0,15	68 42 55,29	58,88	+3,59	
	11	7 59,0	24 2,14	2,31	+0,17	69 14 12,03	14,32	+2,29	
	12	9 8,9	29 8,75	9,08	+0,33	69 30 45,00	45,33	+0,33	
	13	10 17,6	34 14,98	14,56	—0,42	69 47 52,42	50,90	—1,52	
	14	11 25,3	39 19,26	18,85	—0,41	70 5 33,05	30,54	—2,51	
	20	17 44,9	9 9 18,85	18,84	—0,01	72 2 45,60	46,37	+0,77	
	23	20 37,5	24 2,09	2,11	+0,02	73 8 5,48	10,24	+4,76	
	28	25 2,9	48 10,58	10,01	—0,57	75 6 9,28	6,79	—2,49	
Aug.	9	33 44,5	10 44 12,29	11,97	—0,32	80 26 37,46	36,35	—1,11	
	28	43 45,9	12 9 9,94	9,44	—0,50	89 58 59,54	58,86	—0,68	

Digitized by Google

1837.	Madras Mean Time of Observation.	A. R. from Observation.	A. R. from N. A.	Error of N. A.	N. P. D. from Observation.	N. P. D. from N. A.	Error of N. A.	REMARKS.
	h. m. s.	h. m. s.	"	"	° ' "	"	"	
Sep. 13	1 51 29,6	13 19 59,89	59,53	—0,36	98 10 51,32	56,26	+4,94	
14	52 1,6	24 28,49	28,00	—0,49	98 40 38,49	46,27	+7,78	
20	55 26,0	51 32,75	32,14	—0,61	101 35 30,98	35,58	+4,60	
21	56 2,6	56 5,77	5,39	—0,38	102 3 53,62	55,49	+1,87	
22	56 40,2	0 40,08	39,48	—0,60	102 31 54,74	59,69	+4,95	
23	57 18,5	5 15,01	14,44	—0,57	102 59 40,23	47,34	+7,11	

Observed Right Ascension and North Polar Distance of MARS, *compared with the places interpolated from the Nautical Almanac.*

1836.	Madras Mean Time of Observation.	A. R. from Observation.	A. R. from N. A.	Error of N. A.	N. P. D. from Observation.	N.P.D. from N. A.	Error of N. A.	REMARKS.
	h. m. s.	h. m. s.	"	"	° ' "	"	"	
July 18	20 40 19,2	4 28 9,90	9,52	—0,38	68 28 40,56	41,29	+ 0,73	
19	39 19,2	31 4,83	4,54	—0,29	68 21 27,46	26,03	— 1,43	
Aug. 26	19 58 22,0	6 19 50,07	49,99	—0,08	———	———	———	
Sep. 9	19 41 7,5	6 57 44,13	43,59	—0,54	66 39 51,28	45,95	— 5,33	
11	38 30,3	7 2 59,07	59,28	+0,21	66 45 16,85	15,46	— 1,39	
12	37 11,4	7 5 36,35	36,40	+0,05	66 48 18,11	11,23	— 6,88	
13	35 49,6	7 8 12,34	12,64	+0,30	66 51 21,35	16,36	— 4,99	
Oct. 13	18 50 10,4	8 20 40,78	41,05	+0,27	69 14 52,77	51,19	— 8,58	
14	18 48 26,1	22 52,91	53,46	+0,55	———	———	———	
1837.								
Jan. 26	13 16 43,4	9 40 18,18	18,00	—0,18	71 19 39,84	27,37	—12,47	
27	13 11 22,4	38 53,01	52,48	—0,53	11 32,84	21,41	—11,43	
28	13 5 58,4	37 25,45	25,10	—0,35	3 23,76	14,12	— 9,64	
29	13 0 34,3	35 56,24	55,99	—0,25	70 55 18,18	6,21	—11,97	
31	12 49 40,2	32 53,67	53,27	—0,40	39 11,00	58,35	—12,65	
Feb. 2	12 38 42,2	29 46,43	45,64	—0,79	23 19,06	4,87	—14,19	
3	33 10,5	28 10,84	10,45	—0,39	15 31,87	16,21	—15,66	
4	27 38,4	26 35,03	34,59	—0,44	7 49,57	34,20	—15,37	
5	22 6,5	24 58,66	58,26	—0,40	0 16,20	0,04	—16,16	
6	16 34,7	23 22,17	21,61	—0,56	69 52 50,49	34,66	—15,83	
7	11 0,9	21 45,46	44,89	—0,57	45 32,92	18,51	—14,41	
8	5 20,5	20 8,44	8,20	—0,24	38 26,93	14,16	—12,77	
9	11 59 58,1	18 32,49	31,74	—0,75	69 31 32,82	20,48	—12,34	
10	54 27,3	16 56,68	56,10	—0,58	25 50,37	38,95	—11,42	
11	48 55,6	15 21,48	21,09	—0,39	18 20,70	11,67	— 9,03	
12	43 19,6	13 47,21	46,71	—0,50	12 4,45	55,18	— 9,27	
13	37 25,8	12 13,99	13,53	—0,46	7 1,36	53,89	— 7,47	
14	32 29,6	10 41,96	41,27	—0,69	0 13,57	7,57	— 6,00	
15	27 3,7	9 11,37	10,87	—0,50	68 54 42,75	35,07	— 7,68	
17	16 14,4	6 14,73	14,40	—0,33	44 23,73	18,02	— 5,71	
18	10 53,8	4 49,42	48,85	—0,57	39 37,07	32,66	— 4,41	
19	6 34,7	3 25,69	25,21	—0,48	35 8,82	2,22	— 6,60	
26	10 29 25,9	8 44 46,47	45,70	—0,77	11 24,99	17,89	— 7,10	
27	24 25,6	53 42,33	42,05	—0,28	9 5,45	59,41	— 6,04	
28	19 29,8	52 42,18	41,32	—0,86	7 2,50	57,11	— 5,39	
Mar. 1	14 36,1	51 34,21	43,60	—0,61	5 14,93	10,55	— 4,38	
4	9 59 14,5	49 9,21	8,45	—0,76	1 28,08	24,94	— 3,14	
5	55 32,8	48 23.88	23,13	—0,75	0 43,10	40,23	— 2,87	

1837.	Madras Mean Time of Observation.	A. R. from Observation.	A. R from N. A.	Error of N. A.	N. P. D. from Observation.	N. P. D. from N. A.	Error of N. A.	REMARKS.
	h. m. s.	h. m. s.	″	″	° ′ ″	″	″	
Mar. 6	9 50 54,5	8 47 41,62	40,96	—0,66	68 0 12,89	10,29	—2,60	
7	46 20,1	47 2,73	2,06	—0,67	67 59 56,98	54,75	—2,23	
8	41 48,7	46 27,11	26,44	—0,67	67 59 55,96	53,67	—2,29	
9	37 20,4	45 54,54	54,05	—0,49	68 0 8,36	6,67	—1,69	
10	32 55,6	45 25,53	24,91	—0,62	0 35,87	33,71	—2,16	
11	28 33,5	44 59,53	59,03	—0,50	1 15,99	14,51	—1,48	
12	24 15,6	44 36,94	36,41	—0,53	2 11,06	8,74	—2,32	
13	19 59,8	44 17,53	17,00	—0,53	3 18,38	15,71	—2,67	
16	7 33,6	43 38,65	37,90	—0,75	7 53,22	53,06	—0,16	
17	3 30,7	43 31,69	31,13	—0,56	9 50,11	48,55	—1,56	
18	8 59 31,2	43 28,16	27,45	—0,71	11 58,38	56,08	—2,30	

Apparent Right Ascension and North Polar Distance of VESTA, *compared with the places interpolated from the Nautical Almanac.*

1836.	Madras Mean Time of Observation.	A. R. from Observation.	A. R. from N. A.	Error of N. A.	N. P. D. from Observation.	N. P. D. from N. A.	Error of N. A.	REMARKS
	h. m. s.	h. m. s.	″	″	° ′ ″	″	″	
Mar. 11	12 52 13,5	12 10 9,52	11,57	+2,05	78 8 32.31	46,81	+14,50	
12	47 25,4	9 17,54	19,88	2,34	78 0 30,28	46,11	15,83	
13	42 37,5	8 25,60	27,64	2,04	77 52 34,42	50,17	15,75	
14	37 47,8	7 32,16	34,44	2,28	77 44 45,96	60,48	14,52	
15	32 53,7	6 38,42	40,81	2,39	77 37 2,65	17,49	14,84	
16	28 9,2	5 44,51	46,72	2,21	77 29 26,55	43,80	17,25	
17	23 19,1	4 49,77	52,21	2,44	77 22 1,54	14,24	12,70	
20	8 47,4	2 5,05	7,03	1,98	77 0 32,74	44,87	12,13	
21	3 55,6	1 9,40	11,76	2,36	76 53 43,43	56,85	13,42	
22	11 59 4,5	0 14,29	16,49	2,20	76 47 6,49	18,52	12,03	
25	44 31,8	11 57 28,87	31,54	2,67	76 28 23,13	34,70	11,57	
26	39 42,1	56 34,76	37,12	2,36	76 22 33,44	40,64	7,20	
28	30 3,0	54 47,25	49,61	2,36	76 11 35,40	46,51	11,11	
29	25 14,5	53 44,11	56,68	2,57	76 6 27,33	38,38	11,05	
April 1	10 52,0	51 19,30	21,93	2,63	75 52 28,03	39,13	11,10	
2	6 6,5	50 29,37	31,89	2,52	75 48 19,34	27,53	8,19	
5	10 51 55,1	49 5,02	7,49	2,47	75 37 19,82	31,35	11,53	
6	47 13,1	47 19,16	21,50	2,34	75 34 14,19	23,32	9,13	
7	42 32,3	46 34,11	36,59	2,48	75 31 21,95	31,24	9,29	
8	37 52,7	45 50,56	52,89	2,33	75 28 46,82	55,36	8,54	
9	33 14,5	45 8,05	10,45	2,40	75 26 26,38	34,82	7,94	
10	28 37,5	44 26,92	29,32	2,40	75 24 22,54	30,61	8,07	
11	24 1,7	43 47,05	49,51	2,46	75 22 34,63	42,69	8,06	
12	19 27,9	43 8,74	11,14	2,40	75 21 3,31	10,88	7,57	
13	14 55,0	42 31,72	33,82	2,10	75 19 46,91	55,23	8,32	
14	10 27,9	41 56,42	58,77	2,35	75 18 49,17	55,71	6,54	
15	5 53,6	41 22,37	24,48	2,11	75 18 5,45	13,79	8,34	
16	1 26,4	40 50,35	52,52	2,17	75 17 38,25	45,02	6,77	
17	9 57 3,8	40 19,39	Places given approximately only in the N.A.		75 17 26,25			
18	52 39,5	39 50,31			75 17 31,85			
19	48 9,7	39 22,77			75 17 51,06			
20	43 53,8	38 57,18			75 18 25,86			
22	35 15,2	38 10,77			75 20 23,88			

Digitized by Google

1836.	Madras Mean Time of Observation.	A. R. from Observation.	A. R. from N. A.	Error of N. A.	N. P. D. from Observation.	N. P. D. from N. A.	Error of N. A.	REMARKS.
	h. m. s.	h. m. s.	"	"	° ' "	"	"	
April 23	9 30 59,0	11 37 50,11	Places given approxim-ately only in the N. A.		75 21 45,89			
26	18 19,7				75 27 19,66			
27	14 6,5	36 45,21			75 29 37,78			
28	9 59,1	36 33,34			75 32 10,81			
1837.								
Aug. 27	12 51 56,7	23 15 14,52	16,13	+1,61	106 3 37,22	20,34	−16,88	
28	47 9,6	14 22,13	24,39	2,26	106 11 42,15	26,14	16,01	
29	42 21,5	13 30,21	32,04	1,83	106 19 44,08	26,87	17,21	
Sept. 13	11 29 41,5	22 59 56,73	58,60	1,87	108 3 35,34	23,72	11,62	
14	25 3,3	59 4,39	6,02	1,63	108 9 5,66	53,03	12,63	
21	10 51 45,4	53 16,73	18,77	2,04	108 41 15,29	4,36	10,93	
22	47 4,0	52 31,02	32,88	1,86	108 44 55,29	44,56	10,73	
23	42 23,6	51 46,33	48,09	1,76	108 48 20,64	10,45	10,19	
24	37 44,3	51 2,68	4,51	1,83	108 51 31,98	21,98	10,00	
27	24 12,6	48 59,38	1,00	1,62	108 59 40,51	29,75	10,76	

Apparent Right Ascension of North Polar Distance of JUNO, *compared with the places interpolated from the Nautical Almanac.*

1836.	Madras Mean Time of Observation.	A. R. from Observation.	A. R. from N. A.	Error of N. A.	N. P. D. from Observation.	N. P. D. from N. A.	Error of N. A.	REMARKS.
	h. m. s.	h. m. s.	"	"	° ' "	"	"	
Jan. 2	11 50 55,7	6 36 39,36	35,76	−3,60	89 25 24,11	44,32	+20,21	
3	46 6,8	35 46,65	42,97	3,58	89 20 5,30	28,33	23,03	
6	31 44,1	33 11,25	7,59	3,66	89 2 40,10	1,45	21,35	
7	26 57,7	32 20,57	17,09	3,48	88 56 18,76	41,00	22,24	
8	22 12,4	31 30,89	27,42	3,47	88 54			a Star observed by mistake.
11	8 0,7	29 6,84	3,29	3,55	88 28 27,83	51,78	23,95	
13	10 58 39,0	27 36,26	32,42	3,83	88 13 14,16	35,68	21,52	
14	53 58,6	26 52,38	48,77	3,61	88 5 17,82	38,50	20,68	
16	44 43,2	25 28,83	25,29	3,54	87 54			a Star observed by mistake.
24	8 43,4	20 54,73	51,09	3,64	86 36 32,10	53,17	21,07	
31	9 38 42,7	18 24,98	21,73	3,25	85 27 43,67	2,69	19,02	
Feb. 1	34 30,0	18 10,90	7,79	3,11	85 17 41,71	58,31	16,60	
2	30 22,9	17 58,61	55,75	2,86	85 7 33,56	51,80	18,24	
1837.								
April 11	12 27 41,2	13 46 49,29	44,93	4,36	89 53 47,86	40,43	− 7,43	very faint.
12	22 58,3	46 1,96	57,86	4,10	89 47 26,13	18,41	− 7,72	———
18	11 54 38,7	41 17,56	14,27	3,29	89 3 54,29	51,62	− 2,67	———
23	31 7,5	37 25,15	21,33	3,82	88 31 21,51	20,65	− 0,86	———
27	12 24,0	———	———	———	88 7 41,12	35,05	− 6,07	———

Apparent Right Ascension and North Polar Distance of PALLAS, *compared with the places interpolated from the Nautical Almanac.*

1836.	Madras Mean Time of Observation.	A.R. from Observation.	A. R. from N. A.	Error of N. A.	N.P.D. from Observation.	N.P.D from N. A.	Error of N. A.	REMARKS.
	h. m. s.	h. m. s.	"	"	° ' "	"	"	
Aug. 17	11 13 55,3	20 58 27,79	29,49	+1,70	78 46 25,87	3,04	−22,83	thick haze
Sep. 10	9 24 53,9	20 43 46,11	47,46	1,35	83 22 58,84	30,85	27,99	faint.
1837.								
Oct. 13	12 48 29,5	2 18 4,00	7,73	+3,73	108 25 46,49	25,58	−20,91	
16	35 32,4	15 54,80	58,13	3,33	109 14 57,40	42,43	14,97	
23	2 36,2	10 29,23	32,96	3,73	111 0 57,31	44,09	13,22	
25	11 53 7,6	8 52,42	56,21	3.79	111 28 32,49	19,07	13,42	

Digitized by Google

Apparent Right Ascension and North Polar Distance of CERES, *compared with the places interpolated from the Nautical Almanac.*

1836.	Madras Mean Time of Observation.	A. R. from Observation.	A. R. from N. A.	Error of N. A.	N. P. D. from Observation.	N. P. D. from N. A.	Error of N. A.	REMARKS.
	h. m. s.	h. m. s.	"	"	° ′ ″	"	"	
Sep. 12	12 1 0,3	23 28 10,79	10,70	—0,09	110 44 57,12	48,64	— 8,48	
Oct. 1	10 31 16,5	13 7,18	7,04	—0,14	111 42 16,52	10,08	6,44	
3	22 3,4	11 45,90	45,67	—0,23	44 4,82	1,21	3,61	
6	8 21,6	9 50,94	51,04	+0,10	45 20,87	15,63	5,24	
7	3 49,8	9 14,92	14,95	+0,03	45 24,46	16,01	8,45	
8	9 59 18,8	8 40,05	39,89	—0,16	45 10,90	4,27	6,63	
1837.								
Dec. 17	11 14 40,6	4 59 17,27	18,35	+1,08	67 37 36,77	28,96	— 7,81	obsd. at circle
18	8 45,8	57 17,05	17,87	+0,82	35 36,44	58,38	+21,94	Probably a star

Apparent Right Ascension and North Polar Distance of JUPITER, *compared with the places interpolated from the Nautical Almanac.*

1836.	Madras Mean Time of Observation.	A. R. from Observation.	A. R. from N. A.	Error of N. A.	N. P. D. from Observation.	N. P. D. from N. A	Error of N. A.	REMARKS.
	h. m. s.	h. m. s.	"	"	° ′ ″	"	′	
Jan. 2	12 2 22,3	6 46 57,33	57,62	+0,29	66 54 53,56	56,62	+3,06	
6	11 43 9,0	44 37,85	38 19	+0,34	51 50,89	49,94	—0,95	
7	38 38,4	44 3,14	3,55	+0,41	51 3,99	4,82	+0,83	
8	34 8,3	43 28,57	29 04	+0,47	50 20,34	20,40	+0,06	
9	29 38,4	42 54,34	54,70	+0,36	49 35,37	36,77	+1,40	
11	20 37,9	41 46,14	46,60	+0,46	48 9,87	11,62	+1,75	
13	11 39,4	40 39,09	39,48	+0,39	46 47,54	48,81	+1,27	
14	7 9,7	40 6,08	6,34	+0,26	46 8,92	8,69	—0,23	
16	10 58 12,8	39 0,08	0,72	+0,64	44 50,35	51,05	+0,70	
19	44 50,6	37 25,43	25,98	+0,55	43 3,52	0,41	—3,11	
20	40 24,0	36 54,52	55,15	+0,60	42 27,22	25,10	—2,12	
24	22 41,9	34 ——	——	——	40 12,65	12,45	—0,20	
31	9 52 6,8	31 51,27	51,39	+0,12	36 51,96	52,39	+0,43	
Feb. 1	47 46,8	31 27,27	27,50	+0,23	36 27,52	27,05	—0,47	
2	43 27,4	31 3,90	4,24	+0,34	36 0,43	2,54	+2,11	
3	39 9,4	30 41,60	41,67	+0,07	35 38,71	38,82	+0,11	
4	34 51,7	30 19,84	19,82	—0,02	35 14,70	15.81	+1.11	
5	30 34,5	29 58,75	58,68	—0,07	34 53,33	53,40	+0,07	
7	22 3,6	29 18,81	18,64	—0,17	34 11,73	11,47	—0,26	
8	17 48,5	29 0 09	59,74	—0,35	33 51,93	51.56	—0,37	
10	9 20,9	28 24,60	24,29	—0.31	33 14,51	13,83	—0,68	
11	5 8,9	28 8,03	7,74	—0,29	32 55,86	56,02	+0,16	
13	8 56 46,3	27 37,10	36,97	—0,13	32 23,25	22,58	—0 67	
14	52 36,9	27 23,24	22,86	—0,38	32 6,65	6,91	+0,26	
15	48 27,2	27 9,76	9,57	—0,19	31 53,05	51,84	—1,21	
16	44 19,0	26 57,69	57,12	—0,57	31 ——	37,47	——	
17	40 11,5	26 45,92	45,52	—0,40	31 25,73	23,61	—2,12	
18	36 5,0	26 35,06	34,76	—0,30	31 13.23	10,54	—2,69	
21	23 50,5	26 8,13	7,61	—0,52	29 37,60	35,13	—2,47	
23	15 44,9	25 54,10	53,81	—0,29	30 13,28	14,53	+1,25	

Digitized by Google

Apparent Right Ascension and North Polar Distance of JUPITER *continued.*

1836.	Madras Mean Time of Observation.	A. R. from Observation.	A. R. from N. A.	Error of N. A.	N. P. D. from Observation.	N.P.D. from N. A.	Error of N. A.	REMARKS.
	h m. s.	h. m. s.	"	"	° ' "	"	"	
Feb. 26	8 3 42,6	6 25 39,63	39,62	—0,01	66 29 49,59	49,03	—0,56	
27	7 59 43,6	25 36,69	35,82	—0,87	29 40,27	40,62	+0,35	
Mar. 14	6 57 55,1	26 43,43	43,41	—0.02	28 55,84	57,65	+1,81	
17	46 43,8	27 19,37	19,43	+0,06	29 7,25	6,15	—1,10	
18	43 1,2	27 32,89	32,87	—0,02	29 8,25	10.16	+1,91	
19	39 20,2	27 47,77	46,90	—0,87	————	14,88	——	
June 15	1 50 53,8	7 25 30,81	30,55	—0,26	67 40 57,52	54,34	—3,18	
Sep. 9	21 27 1,2	8 43 54,63	54,35	—0,28	71 22 44,39	42,30	—2,09	
12	21 17 34,2	46 15,62	15,83	+0,21	32 25,11	21,61	—3,60	
20	20 52 8,8	52 19,45	18,91	—0,54	55 14,36	13,07	—1,29	
Oct. 2	20 13 17,3	9 0 39,90	39,82	—0,08	72 27 37,17	38,85	+1,68	
3	20 10 0,2	1 18,98	18,92	—0,06	30 13,32	10,76	—2,56	
6	20 0 7,5	3 13,54	13,25	—0,29	37 48,45	49,23	+0,78	
12	19 40 4,2	6 49,94	49,89	—0,05	52 14,50	15,62	+1,12	
13	36 46,0	7 24,98	24,25	—0,73	54 35,48	35,05	—0,43	
14	33 24,3	7 58,53	58,16	—0,37	56 50,97	50,71	—0,26	
19	16 21,1	10 40,39	39,81	—0,58	73 7 46,61	44,83	—1,78	
1837.								
Jan. 26	12 43 19,7	9 6 49,00	48,29	—0,71	72 29 15,51	14,28	—1,23	
27	38 52,4	6 17,72	16,93	0,79	26 51,27	50,01	1,26	
28	34 24,4	5 46,19	45,41	0,78	24 25,75	25,70	0,05	
29	29 57,4	5 14,30	13,76	0,54	22 1,82	1,49	0,33	
31	21 1,9	4 10,71	10,16	0,55	17 15,35	13,57	1,78	
Feb. 2	12 7,1	3 6,95	6,31	0,64	12 32,37	27,37	5,00	
3	7 38,2	2 35,13	34,41	0,72	10 8,34	5,06	3,28	
4	3 10,6	2 3,31	2,53	0,78	7 46,85	43,75	3,10	
5	11 58 42,8	1 31,10	30,68	0,42	5 24,68	22,99	1,69	
6	54 16,4	0 59,56	58,90	0,66	3 6,13	3,13	3,00	
7	49 46,8	0 27,79	27,21	0,58	0 44,61	44,27	0,34	
8	45 21,5	8 59 56,18	55,64	0,54	71 58 28,37	26,51	1,86	
9	40 53,7	59 24,85	24,20	0.65	56 9,43	10,05	+0,62	
10	36 27,1	58 53,50	52,93	0,57	53 55,91	54.79	—1,12	
11	31 59,2	58 22,30	21,81	0,49	51 44,00	40,93	3,07	
12	26 26,3	57 51,39	50,97	0,42	49 28,67	28,57	0,10	
13	23 6,8	57 21,05	20,33	0,72	47 18,95	17,80	1,15	
14	18 39,5	56 50,52	49,80	0,72	45 9,30	8,05	1,25	
15	14 14,9	56 20,46	19,72	0,74	43 3,05	1,60	1,45	
17	5 22,3	55 21,05	20,49	0,56	38 53,68	52,60	1,08	
18	0 58,4	54 52,10	51,38	0,72	36 53,07	51,05	2,02	
19	10 56 33,7	55 23,22	22,63	0,59	34 52,83	51,59	1,24	
20	52 9,7	55 54,95	54,26	0,69	32 52,66	54,14	+1,48	
21	47 45,5	53 26,69	26,29	0,40	31 2,09	58,73	—3,36	
26	24 53,7	50 13,59	13,04	0,55	21 57,26	56,45	—0.81	
27	20 32,3	49 48,41	47,84	0,57	20 16,65	15,34	—1,31	

Digitized by Google

Apparent Right Ascension and North Polar Distance of SATURN, *compared with the places interpolated from the Nautical Almanac.*

1836.	Madras Mean Time of Observation.	A. R. from Observation.	A. R. from N. A.	Error of N. A.	N. P. D. from Observation.	N. P. D. from N. A.	Error of N. A.	Rrmarks.
	h. m. s.	h. m. s.	"	"	° ' "	"	"	
April 13	12 37 21,5	14 5 21,56	21,60	+0,04	99 48 37,10	53,39	+16,29	
14	33 8,6	5 4.47	4,56	+0,09	47 3,42	19,93	16,51	
15	28 55,0	4 47,23	47,45	+0,22	45 28,80	46,37	17,57	
16	24 43,4	4 30,29	30.11	—0,18	43 54,80	12,45	17,65	
17	20 29,0	4 12,89	13,03	+0,14	42 21,36	39,05	17,69	
19	12 3,0	3 38,20	38,43	+0,23	39 13,78	31,83	18,05	
20	7 49,7	3 20,97	21,09	+0,12	37 41,46	58,67	17,21	
22	11 59 23,4	2 46,34	46.36	+0,02	35 33,45	52,55	19,10	
23	55 9,8	2 28,86	28,99	+0,13	33 2,50	19,89	17,39	
24	50 57,2	2 11,59	11,64	+0,05	31 27,80	47,63	19,83	
26	42 32,7	1 36,90	36,99	+0,09	28 25,63	44,31	18,68	
28	34 4,4	1 2,32	2,47	+0,15	25 23,37	42,69	19,32	
29	29 50,6	0 45,15	45,28	+0,13	23 51,92	12,65	20,73	
May 1	21 25,3	0 10,91	11,14	+0,23	20 54,84	14,61	19,77	
4	8 47,2	13 59 20,85	20,59	—0,26	16 31,82	53,49	21,67	
5	4 35,2	59 4,03	3,94	—0,09	15 6,10	28,12	22,02	
7	10 56 10,3	58 31,13	31,80	+0,67	12 18,97	39,91	20,94	haze.
8	52 1,0	58 14.95	14,71	—0,24	10 59,32	17,28	17,96	
9	47 44,9	57 58,60	58,56	—0,04	9 34,70	55,35	20,65	
11	39 22,5	57 26,68	26.71	+0,03	6 55,93	15,19	19,26	
15	22 38,2	56 25,19	24,98	—0,21	1 46,42	8,87	22,45	
18	10 5,2	55 40,63	40,72	+0,09	98 58 12,24	32,98	20,74	
19	5 55,1	55 26,35	26,39	+0,04	57 3,42	23,85	20,43	
23	9 49 17,0	54 31,37	31,38	+0,01	52 40,93	2,13	21,20	
28	28 34,1	53 28,28	28,32	+0,04	37 47,90	11,61	23,71	
June 10	8 35 17,1	51 17,72	17,90	+0,18	38 40,47	4,31	23,84	
11	31 13,9	51 10,34	10,07	—0,27	38 10,83	35,73	24,90	
12	27 9,8	51 2,68	2,58	—0,10	37 45,21	9,15	23,94	
13	23 6,8	50 55,73	55,43	—0,30	37 22,83	44,57	21,74	
14	19 4,4	50 48,89	48,63	—0,26	36 58,22	22,09	23,87	
17	6 2,2	50 30,38	30,30	—0,08	36 4,61	27,24	22,63	
20	7 52 41,2	50 15,29	15,16	—0,13	35 28,40	50,48	22,08	
28	23 3,8	49 51,06	50,80	—0,26	35 24,73	47,10	22,37	
30	15 9,5	49 48,69	48,13	—0,46	35 44,33	7,74	23,41	
July 2	7 16,5	49 47,61	47,41	—0,20	——	——	——	
4	6 59 25,3	49 48,16	47,87	—0,29	——	——	——	
1837.								
Mar. 2	16 19 23,2	15 1 27,46	27,17	—0,29	104 35 48,49	6,56	18,07	
8	15 55 26,9	1 7,60	6,15	—0,45	33 3,73	19,72	15,99	
May 1	12 11 35,7	14 49 32,50	31,85	—0,65	103 36 15,28	39,22	23,94	
2	7 22,1	49 14,13	14,15	+0,02	34 55,87	20,41	24,54	
3	3 8,3	47 56,67	56,42	—0,25	33 36.82	59,80	22,98	
4	11 58 54,6	48 39,01	38,68	—0,33	32 17,72	41,39	23,67	
11	29 19,9	46 35,43	34,94	—0,49	23 19,44	42,22	22,78	
12	25 6,6	46 17,91	17,42	—0,49	22 4,95	26,81	21,86	
14	16 40,0	45 43,12	42,14	—0,98	——	——	——	
15	12 27,7	45 25,98	25,38	—0,60	——	——	——	
30	10 9 26,3	41 23,17	22,23	—0,94	1 38,44	58,32	19,88	
July 11	7 18 13,1	35 17,05	16,77	—0,28	102 42 43,60	3,22	19,62	
Aug. 8	5 29 53,4	37 3,82	3,12	—0,70	102 58 55,10	15,56	20,46	

Digitized by Google

Apparent Right Ascension and North Polar Distance of GEORGIAN, *compared with the interpolated place from the Nautical Almanac.*

1836.	Madras Mean Time of Observation.	A. R. from Observation.	A. R. from N. A.	Error of N. A.	N. P. D. from Observation.	N. P.D. from N. A.	Error of N. A.	REMARKS
	h. m. s.	h. m. s.	"	"	° ′ "	"	"	
Sep. 16	10 33 18,2	22 16 0,62	4,23	+3,61	101 37 29,65	21,93	— 7,72	
23	4 51,0	15 5,11	8,76	3,65	42 34,57	26,20	8,37	
Oct. 1	9 32 26,9	14 7,93	11,49	3,56	47 43,17	36,12	7,05	
3	24 22,0	13 54,96	57,39	2,43	48 53.13	46,28	6,85	
6	12 15,6	13 35,99	39,73	3,74	50 32,85	25,72	7,13	
7	8 14,2	13 30,22	33,79	3,57	51 2,40	57,20	5,20	
8	4 11,3	13 24,49	28,03	3,54	51 33,63	27,78	5,85	
10	8 56 9,4	13 13,40	16,83	3,43	52 35,21	26,44	8,77	
11	52 7,9	13 7,90	11,48	3,58	53 3,26	54,52	8,74	
12	48 6,4	13 2,60	6,30	3,70	53 29,29	21,70	7,59	
13	44 6,2	12 57,72	1,26	3,54	53 55,54	47,88	7,66	
14	40 5,3	12 52,90	56,39	3,49	54 21,03	13,06	7,97	
15	36 4,8	12 48,43	51,68	3,25	54 44,75	37,37	7,38	
1837.								
Aug. 28	12 11 20,8	22 34 28,67	32,89	+4,22	99 51 42,94	27,19	—15,75	
29	3 18,0	22 34 19,78	23,92	4,14	52 37,60	20,30	17,30	
Sep. 13	11 2 5,5	32 6,16	10,41	4,25	100 5 36,65	21,10	15,55	
14	10 58 1,0	31 57,58	1,81	4,23	6 26,69	10,88	15,81	
21	29 31,7	30 59,38	3,33	3,95	12 3,89	47,80	16,09	
22	25 27,9	30 51,50	55.27	3,77	12 49.62	33,96	15,66	
23	21 24,0	30 43.32	47,29	3,97	13 38,22	19,62	18,60	
24	17 20,3	30 35,38	39,30	3,92	14 20,42	4,78	15,64	
27	5 9,0	30 12,10	16,14	4,04	16 33,32	16,26	17,06	

Comparison of the Observed Right Ascension and North Polar Distance of the Moon, with the interpolated place from the Nautical Almanac.

1836.	Madras Mean Time.	Limb Observed.	Observed A. R. of ☽'s Centre.	A. R. from N. A.	Error of Tables.	N. or S. Limb.	Observed N. P. D. of ☽'s Centre.	N. P. D. from N. A.	Error of Tables.	REMARKS.
	h. m. s.		h. m. s.	s.	s.		° ′ "	"	"	
Jan. 2	11 0 18,4	1	5 46 59,37	58,73	—0,64	N.	64 6 46,9	48,9	+ 2,0	
3	11 51 31,4	1	6 42 18,46	18,03	— ,43	N.	65 30 40,8	43,2	2,4	
25	5 51 46,9	1	2 7 14,75	14,92	+ ,17	S.	79 8 ——	——	——	Fl. Clds.
26	6 34 29,8	1	2 55 0,18	0,48	+ ,30	N.	74 35 ——	——	——	
27	7 18 44,8	1	3 43 21,21	21,09	— ,12	S.	69 55 ——	——	——	
28	8 5 11,4	1	4 33 52,99	52,66	— ,33	S.	66 48 21,4	18,6	— 2,8	
31	10 36 37,1	1	7 17 35,39	34,73	— ,66	N.	63 47 22,0	22,0	0,0	
Feb. 1	11 28 26,5	1	8 13 29,73	29,17	— ,56	N.	65 27 19,2	14,6	— 4,6	
2	12 20 17,1	Cent.	9 8 19,24	18,91	— ,33	N.	68 25 32,4	35,2	+ 2,8	
26	7 36 11,8	1	5 59 10,51	10,45	— ,06	S.	63 32 29,2	35,9	+ 6,7	
27	8 27 34,0	1	6 54 38,38	38,51	+ ,13	N.	63 19 7,6	7,5	— 0,1	
28	9 19 24,1	1	7 50 33,56	32,95	— ,61	N.	64 27 45,0	43,0	— 2,0	
29	10 10 40,3	1	8 45 54,09	53,31	— ,78	N.	66 57 28,7	28,3	— 0,4	
Mar. 1	11 0 38,8	1	9 39 56,50	55.57	— ,93	N.	70 42 3,9	57,9	— 6,0	
2	11 49 4,4	1	10 32 25,39	24,61	— ,78	N.	75 30 19,9	14,9	— 5,0	
3	12 38 22,4	2	11 23 40,54	39,90	— ,64	N.	81 8 28,2	27,1	— 1,1	
25	6 18 10,5	1	6 31 20,65	20,19	— ,46	N.	63 1 6,8	2,6	— 4,2	

Digitized by Google

Comparison of the Observed Right Ascension and North Polar Distance of the Moon continued.

1836.		Madras Mean Time.	Limb Observed.	Observed A. R. of ☽'s Centre.	A. R. from N. A.	Error of Tables.	N. or S. Limb.	Observed N. P. D. of ☽'s Centre.	N. P. D from N. A.	Error of Tables.	Remarks.
		h. m. s.		h. m. s.	s.	s.		° ′ ″	″	″	
Mar.	26	7 9 30,7	1	7 26 45,56	45,74	+0,18	N.	63 35 38,7	36,2	— 2,5	
	27	8 0 33,2	1	8 21 52,84	53,11	+ ,27	N.	65 31 14,3	7,6	— 6,7	
	28	8 50 35,2	1	9 15 59,88	59,53	— ,35	N.	68 43 42,1	38,0	— 4,1	
	29	9 39 20,5	1	10 8 47,36	46,42	— ,94	N.	73 5 16,0	14,2	— 1,8	
	30	10 26 53,2	1	11 0 23,89	23,25	— ,64	N.	78 24 41,8	40,0	— 1,8	
	31	11 13 49,9	1	11 51 24,81	24,29	— ,52	N.	84 27 46,8	43,0	— 3,8	
April.	1	12 2 9,2	Cent.	12 42 44,91	44,54	— ,37	N.	90 57 27,2	24,7	— 2,5	
	24	6 41 35,1	1	4 53 1,31	1,10	— ,21	N.	67 4 24,8	22,6	— 2,2	
	26	8 16 52,9	1	10 36 29,49	29,28	— ,21	N.	75 43 26,6	22,6	— 4,0	
	27	9 3 11,1	1	11 26 51,58	50,96	— ,62	N.	81 23 26,6	25,2	— 1,4	
	28	9 49 36,8	1	12 17 21,58	21,16	— ,42	N.	87 40 2,2	1,1	— 1,1	
	29	10 37 18,4	1	13 9 6,85	6,59	— ,26	N.	94 16 18,0	17,1	— 0,9	
	30	11 27 25,0	1	14 3 21,86	21,87	+ ,01	N.	100 59 31,1	35,1	+ 4,0	
May	26	8 25 39,3	1	12 43 33,97	33,86	— ,11	N.	91 1 44,2	43,7	— 0,5	
	28	10 4 37,5	1	14 30 45,25	44,96	— ,29	N.	103 52 9,6	11,7	+ 2,1	
July	26	10 35 18,7	1	18 54 15,57	15,50	— ,07	S.	117 1 26,9	31,1	+ 4,2	
Aug.	21	7 15 25,1	1	17 16 17,22	17,21	— ,01	N.	116 3 25,6	22,9	— 2,7	
Sep.	18	6 10 7,3	1	18 1 11,79	11,70	— ,09	N.	117 18 36,3	35,2	— 1,1	
	19	7 12 46,9	1	19 7 58,78	58,87	+ ,09	S.	117 10 9,6	9,6	0,0	
	20	8 14 24,9	1	20 13 42,79	42,76	— ,03	S.	115 4 37,2	29,0	— 8,2	
	22	10 7 26,7	1	22 14 51,33	51,80	+ ,47	S.	106 7 14,0	3,7	—10,3	
	23	10 58 6,6	1	23 9 34,23	34,64	+ ,41	S.	100 6 47,9	36,2	—11,7	
Oct.	17	5 8 37,8	1	19 54 1,84	1,91	+ ,07	S.	116 2 34,1	34,1	0,0	
	18	7 7 17,0	1	20 56 46,03	46,20	+ ,17	S.	112 45 50,6	52,4	+ 1,8	
	19	8 1 49,3	1	21 55 20,36	20,64	+ ,28	S.	108 6 2,5	57,2	— 5,3	
	20	8 52 20,8	1	22 49 54,74	54,68	— ,06	S.	102 28 12,3	6,8	— 5,5	
	21	9 39 44,0	1	23 41 20,27	20,47	+ ,20	S.	96 16 32,0	25,6	— 6,4	
	22	10 25 7,1	1	0 30 46,95	46,97	+ ,02	S.	89 52 31,4	19,4	—12,0	
Nov.	17	7 37 48,6	1	23 25 32,91	33,03	+ ,12	S.	98 15 1,9	0,5	— 1,4	
	18	3 22 54,1	1	0 14 40,50	40,53	+ ,03	S.	91 58 54,9	51,1	— 3,8	
	22	11 21 41,3	1	3 29 45,94	45,68	— ,26	N.	69 41 2,5	13,9	+11,4	
	23	12 12 28,7	2	4 22 28,07	27,28	— ,79	N.	66 1 25,7	24,5	— 1,2	
Dec.	16	7 5 57,4	1	0 47 54,87	54,56	— ,31	S.	87 30 7,8	4,0	— 3,8	
	17	7 49 25,3	1	1 35 25,93	26,02	+ ,09	S.	81 28 23,6	18,5	— 5,1	
	18	8 33 18,6	1	2 23 25,05	24,90	— ,15	S.	75 55 31,6	27,6	— 4,0	
	19	9 18 38,8	1	3 12 48,90	48,78	— ,12	S.	71 4 20,5	14,1	— 6,4	
	20	10 5 58,7	1	4 4 13,34	12,76	— ,58	S.	67 7 29,7	25,5	— 4,2	
	21	10 55 20,5	1	4 57 42,05	41,47	— ,58	N.	64 17 12,1	11,1	— 1,0	
1837.											
Jan.	17	8 51 51,2	1	4 40 18,98	19,22	+ ,24	S.	64 52 ——	——		First obs. of P. M at Transit.
	18	9 42 6,0	1	5 34 42,28	41,53	— ,75	N.	63 0 4,6	4,4	— 0,2	
	19	10 33 19,6	1	6 29 58,78	58,09	— ,69	N.	62 24 30,5	31,6	+ 1,1	
	20	11 24 16,6	1	7 25 0,20	59,46	— ,74	N.	63 11 1,3	1,3	0,0	
	21	12 14 58,5	Cent.	8 18 40,27	39,59	— ,68	N.	65 15 43,5	42,4	— 1,1	
Feb.	12	5 58 29,5	1	3 29 5,36	5,05	— ,31	S.	69 13 13,9	12,0	— 1,9	
	13	6 47 16,4	1	4 21 51,26	51,18	— ,08	S.	65 38 27,8	27,6	— 0,2	
	14	7 37 27,3	1	5 16 7,48	7,47	— ,01	S.	63 17 21,4	25,6	+ 4,2	
	15	8 28 35,5	1	6 11 20,74	20,70	— ,04	N.	62 16 32,0	31,3	— 0,7	

Digitized by Google

Comparison of the Observed Right Ascension and North Polar Distance of the Moon continued.

1837.	Madras Mean Time.	Limb Observed.	Observed A. R of ☽'s Centre.	A R. from N. A.	Error of Tables	N. or S Limb.	Observed N. P. D. of ☽'s Centre.	N. P. D. from N. A.	Error of Tables.	REMARKS.
	h. m. s.		h. m. s.	s.	s.		° ′ ″	″	″	
Feb. 17	10 9 47,3	1	8 0 42,03	41,23	—0,80	N.	64 19 52,2	54,8	+ 2,6	
18	10 57 59,8	1	8 52 57,02	56,03	—0,99	N.	67 14 26,8	33,3	+ 6,5	
19	11 43 57,3	1	9 42 57,11	56,17	—0,94	N.	71 11 36,0	38,1	+ 2,1	
21	13 12 9,6	2	11 17 12,90	12,48	—0,42	S.	81 24 14,3	15,5	+ 1,2	
Mar. 16	8 3 57,0	1	7 40 57,83	57,89	+0,06	N.	63 23 17,2	20,5	+ 3,3	
17	8 52 53,3	1	8 33 57,39	57,20	—0,19	N.	65 53 53,0	56,3	+ 3,3	
18	9 39 37,2	1	9 24 43,98	43,42	—0,56	N.	69 31 2,7	7,1	+ 4,4	
19	10 24 12,7	1	10 13 22,10	21,47	—0,63	N.	74 3 37,1	43,7	+ 6,6	
20	11 7 8,8	1	11 0 20,55	19,74	—0,81	N.	79 19 49,5	53,0	+ 3,5	
21	11 50 11,2	Cent.	11 46 25,71	25,25	—0,46	N.	85 7 34,6	33,8	— 0,8	
27	16 40 26,1	2	16 59 56,80	56,90	+0,10	S.	116 27 35,0	39,0	+ 4,0	
28	17 41 12,7	2	18 4 47,48	47,48	0,00	N.	117 57 51,8	62,2	+10,4	
April 16	9 1 55,9	1	10 41 15,14	14,46	—0,68	N	77 1 52,5	58,8	+ 6,3	
18	10 26 3,7	1	12 13 29,11	28,72	—0,39	N.	88 39 41,5	49,3	+ 7,8	
19	11 8 56,4	1	13 0 25,89	25,54	—0,35	N.	94 53 31,2	34,0	+ 2,8	
20	11 54 58,4	Cent.	13 49 30,37	30,13	—0,24	N.	101 3 51,6	58,5	+ 6,9	
May 15	8 19 29,3	1	11 53 0,02	59,85	—0,17	N.	85 58 56,8	59,5	+ 2,7	
16	9 1 25,6	1	12 39 1,46	0,90	—0,56	N.	92 5 38,7	39,7	+ 1,0	
17	9 45 9,5	1	13 26 49,63	49,28	—0,35	N.	98 17 54,1	58,9	+ 4,8	
23	15 31 19,2	2	19 35 20,52	19,81	—0,71	N.	116 50 31,4	27,2	— 4,2	
24	16 32 30,4	2	20 40 39,71	39,79	+0,08	N.	113 42 21,6	20,4	— 1,2	
June 12	6 54 46,7	1	12 18 27,25	27,19	—0,06	N.	89 31 ----	----	----	
13	7 36 42,6	1	13 4 28,07	27,65	—0,42	N.	95 35 16,3	19,1	+ 2,8	
14	8 21 9,4	1	13 53 0,74	0,17	—0,57	N.	101 36 45,3	50,2	+ 4,9	
15	9 9 32,9	1	14 45 31,34	30,39	—0,95	N.	107 17 52,1	59,7	+ 7,6	
21	15 20 43,3	2	21 19 5,85	5,40	—0,45	S.	110 13 35,4	34,3	— 1,1	
23	17 6 44,8	2	23 13 23,90	23,61	—0,29	N	98 49 16,2	13,2	— 3,0	
24	17 54 13,7	2	0 4 58,50	58,21	—0,29	N.	92 9 9,5	56,5	—13,0	
July 11	6 13 37,6	1	13 31 33,52	33,23	—0,29	N.	99 16 36,9	30,8	— 6,1	
13	7 48 37,9	1	15 14 48,14	47,83	—0,31	N.	110 10 32,4	36,6	+ 4,2	
14	8 44 2,5	1	16 14 21,48	21,01	—0,47	N.	114 24 45,7	49,3	+ 3,6	
15	9 45 12,7	1	17 19 44,06	43,79	—0,27	N.	117 10 38,9	45,9	+ 7,0	
16	10 50 48,2	1	18 29 25,21	25,01	—0,20	S.	117 58 20,3	26,9	+ 6,6	
Aug. 8	4 53 31,4	1	14 1 38,78	38,65	—0,13	N.	103 8 1,9	5,5	+ 3,6	
9	5 40 3,3	1	14 52 16,95	16,65	—0,30	N.	108 25 22,9	19,1	— 3,8	
10	6 31 21,7	1	15 47 43,47	43,70	+0,23	N.	112 57 32,4	38,8	+ 6,4	
11	7 28 12,2	1	16 48 42,95	42,95	0,00	N.	116 18 50,5	55,1	+ 4,6	
12	8 30 10,4	1	17 54 50,04	49,96	—0,08	S.	118 0 27,2	38,9	+11,7	
13	9 35 15,1	1	19 44 2,60	2,77	+0,17	S.	117 39 1,5	3,2	+ 1,7	
20	16 2 55,2	2	1 58 2,48	2,23	—0,25	N.	77 10 54,9	56,4	+ 1,5	
21	16 51 39,0	2	2 50 50,84	50,59	—0,25	N.	71 36 54,3	51,1	— 3,2	
22	17 41 45,2	2	3 44 58,30	58,79	+0,49	N.	67 8 16,7	14,6	— 2,1	
Sep. 9	7 19 5,6	1	18 33 56,93	56,84	—0,09	S.	118 14 38,6	33,2	— 5,4	
12	10 22 39,3	1	21 49 46,48	46,46	—0,02	S.	107 53 25,8	17,5	— 8,3	
13	11 17 38,4	1	22 48 49,50	49,61	+0,11	S.	101 25 42,4	40,5	— 1,9	
14	12 11 52,7	2	23 44 54,88	54,89	+0,01	N.	94 17 35,6	26,5	— 9,1	
15	13 1 52,5	2	0 39 0,32	0,37	+0,05	N.	87 1 49,0	37,8	—11,2	
16	13 51 13,6	2	1 32 26,80	26,80	0,00	N.	80 5 58,0	43,6	—14,4	
17	14 41 4,8	2	2 26 21,28	21,07	—0,21	N.	73 53 34,2	28,3	— 5,9	
18	15 32 8,8	2	3 21 29,36	29,20	—0,16	N.	68 44 19,0	13,0	— 6,0	

Digitized by Google

Comparison of the Observed Right Ascension and North Polar Distance of the Moon continued.

1837.	Madras Mean Time.	Limb Observed.	Observed A. R. of ☽'s Centre.	A. R. from N. A.	Error of Tables.	N. or S. Limb.	Observed N. P. D. of ☽'s Centre.	N.P.D. from N. A.	Error of Tables.	REMARKS.
	h. m. s.		h. m. s.	s.	s.		° ′ ″	″	″	
Sep. 19	16 24 41,1	2	4 18 6,05	5,76	—0,29	N.	64 53 5,1	56,2	— 8,9	
20	17 18 17,3	2	5 15 47,13	46,89	—0,24	N.	62 29 37,8	35,7	— 2,1	
Oct. 9	8 10 17,9	1	21 23 30,59	30,90	+0,31	S.	110 22 37,4	34,4	— 3,0	
10	9 4 50,6	1	22 22 6,68	6,25	—0,43	S.	104 34 14,6	3,7	—10,9	
12	10 46 17,3	1	0 11 41,71	41,41	—0,30	S.	90 42 42,6	36,0	— 6,6	
13	11 35 26,4	1	1 4 54,41	54,50	+0,09	S.	83 35 17,4	10,1	— 7,3	
Nov. 6	6 58 41,0	1	22 2 3,49	3,23	—0,26	S.	106 40 57,1	53,6	— 3,5	
7	7 49 34,2	1	22 56 59,54	59,40	—0,14	S.	100 26 36,5	37,3	+ 0,8	
Dec. 16	15 54 22,6	2	9 34 45,03	44,25	—0,78	S.	70 56 54,3	55,3	+ 1,0	

On looking over the observations of the last seven years; there have I find been a few observations of the Transit of both limbs of the Moon over the Meridian, which, in the former volumes of the Madras Results I had omitted; they are as follows.

Date.	Madras Mean Time	Sidereal Time of ☾'s Diam. passing
1831	h. m. s.	m. s.
February 26	12 17 48,7	2 7,48
April 26	11 53 47,9	3,06
May 26	12 5 34,1	7,80
September 21	11 51 30,6	12,48
1833		
May 3	11 49 32,2	14,26
July 1	11 50 39,6	15,70
1834		
February 23	12 15 27,8	23,48
1835		
March 14	12 9 11,4	18,16
April 13	12 30 47,8	20,02
May 12	12 6 2,7	26,62
June 10	11 46 29,1	31,68
1836		
February 2	12 20 17,1	15,68
April 1	12 2 9,2	13,16
1837		
January 21	12 14 45,5	14,70
March 21	11 50 11,2	5,32
April 20	11 54 58,4	12,08

In addition to the above,—observation of the Moon, and of several stars culminating near to her *(Moon culminating Stars)*, have been made, as follows.

Digitized by Google

Moon Culminating Stars.

1836.	NAMES.	Observed Transit.	1836.	NAMES.	Observed Transit.
		h m. s.			h. m. s.
Jan. 2	ζ Tauri	5 29 13,01	March 2	Moon 1st Limb	10 29 33,14
	c ——	5 44 23,67		n Leonis	11 5 29,57
	Moon 1st Limb	5 47 15.50		ι ——	11 13 35,05
	μ Geminor.	6 14 24,52	3	n Leonis	11 5 24,89
3	μ ——	6 14 25.66		ι ——	11 13 30,22
	Moon 1st Limb	6 42 35,02		Moon 2nd Limb	11 22 50,81
25	Moon 1st Limb	2 7 8,55	25	Moon 1st Limb	6 29 4,45
	38 Arietis	2 35 55.38		δ Geminor.	7 9 10,07
	π ——	2 40 2,41		ι ——	7 15 22,75
26	38 ——	2 35 47,93	26	δ ——	7 9 6,03
	π ——	2 39 54,60		ι ——	7 14 18,59
	Moon 1st Limb	2 53 44.84		Moon 1st Limb	7 24 25,30
	η Tauri	3 37 30,60		6 Cancri	7 52 12,86
27	η ——	3 37 24,78		λ ——	8 9 33,42
	Moon 1st Limb	3 41 58,60	27	6 ——	7 52 8,63
	ε Tauri	4 18 42,89		λ ——	8 9 29,20
28	δ¹ ——	4 13 7,20		Moon 1st Limb	8 19 29,62
	ε ——	4 18 40,86		ξ Cancri	8 58 37,92
	Moon 1st Limb	4 32 26,88		q ——	9 8 32,11
31	τ Geminor.	7 0 16,26	28	Moon 1st Limb	9 13 32,27
	δ ——	7 9 54,75	29	η Leonis	9 56 57,56
	Moon 1st Limb	7 16 3,47		Moon 1st Limb	10 6 16,16
	φ Geminor.	7 43 2,67		γ Leonis	10 9 29,95
	6 Cancri	7 53 1,65	30	k ——	10 36 13,85
Feb. 1	φ Geminor.	7 43 0,29		Moon 1st Limb	10 47 48,80
	6 Cancri	7 52 59,29		υ Virginis	11 35 55,71
	Moon 1st Limb	8 11 55,77		b ——	11 50 2,89
	ξ Cancri	8 59 28,24	31	υ ——	11 35 50,90
2	ξ ——	8 58 25,24		Moon 1st Limb	11 48 45,11
	Moon Cent.	9 7 49,79		b Virginis	11 49 58,01
26	c Tauri	5 41 38,08		c ——	12 10 26,53
	Moon 1st Limb	5 56 40,18		γ¹ ——	12 31 46,41
	ε Géminor.	6 32 26,57	April 1	c ——	12 10 21,61
27	ε ——	6 32 22,59		γ¹ ——	12 31 41,49
	Moon 1st Limb	6 52 3,55		Moon Cent.	12 40 33,93
28	φ Geminor.	7 41 55,38		α Virginis	13 14 53,68
	Moon 1st Limb	7 47 54,28		m ——	13 31 20,80
	η Cancri	8 21 41,19	24	Moon 1st Limb	8 53 33,70
	γ ——	8 23 15,22		λ Leonis	9 23 59,84
29	η ——	8 21 36,24		ψ ——	9 36 26,37
	γ ——	8 32 10,50	26	γ ——	10 12 44,47
	Moon 1st Limb	8 43 10.41		ρ ——	10 23 59,39
	λ Leonis	9 20 44,34		Moon 1st Limb.	10 37 14,02
March 1	λ ——	9 20 39,32	27	σ Leonis	11 14 35,98
	Moon 1st Limb	9 37 8,50		τ ——	11 21 25,43
	γ Leonis	10 9 13,46		Moon 1st Limb	11 27 42,33
	ρ ——	10 23 28,33		o Virginis	11 58 46,87
2	γ ——	10 9 8,38		η ——	12 13 26,73
	ρ ——	10 22 23,21	28	o ——	11 58 52,81

Digitized by Google

1836.	Names.		Observed Transit.		
			h.	m.	s.
April 28	η Virginis		12	13	32,73
	Moon	1st Limb	12	18	18,26
	δ Virginis		12	49	22,75
	θ ——		13	3	30,02
29	δ ——		12	49	28,55
	θ ——		13	3	35,85
	Moon	1st Limb	13	10	8,52
	k Virginis		14	6	17,56
	ι ——		14	9	33,62
30	Moon	1st Limb	14	4	27,03
	ι Virginis		14	9	38,84
	α^2 Libræ		14	44	2,77
	ξ^2 ——		14	50	6,46
May 26	γ^1 Virginis		12	32	50,72
	Moon	1st Limb	12	41	58,73
28	k Virginis		14	3	30,03
	λ ——		14	9	35,47
	Moon	1st Limb	14	28	56,56
	ι^1 Libræ		15	2	13,83
	γ^1 ——		15	25	42,39
July 26	λ Sagittarii		18	17	10,77
	σ ——		18	44	25,29
	Moon	1st Limb	18	52	17,82
	59 Sagittarii		19	46	12,30
	c ——		19	51	53,71
Aug. 21	θ Ophiuchi		17	11	38,30
	Moon	1st Limb	17	14	44,29
Sep. 18	λ Sagittarii		18	17	33,19
	γ^2 ——		17	55	20,02
	Moon	1st Limb	17	59	0,75
19	σ Sagittarii		18	45	8,33
	ζ ——		18	52	13,07
	Moon	1st Limb	19	6	46,20
20	Moon	1st Limb	20	12	29,35
22	ι Aquarii		21	57	31,05
	θ ——		22	8	6,97
	Moon	1st Limb	22	13	38,00
23	δ Aquarii		23	45	50,72
	φ ——		23	5	43,78
	Moon	1st Limb	23	8	20,36
Oct. 17	h^2 Sagittarii		19	25	31,58
	c ——		19	51	22,53
	Moon	1st Limb	19	51	36,35
	ψ Capricorni		20	35	11,38
	η ——		20	54	52,59
18	ψ ——		20	35	11,16
	Moon	1st Limb	20	54	22,65
	δ Capricorni		21	36	47,84
19	γ ——		21	29	47,86
	δ ——		21	36	47,08
	Moon	1st Limb	21	52	58,74
	τ^2 Aquarii		22	39	42,49
	δ ——		22	44	44,72
20	τ^2 ——		22	39	40,93

1836.	Names.		Observed Transit.		
			h.	m.	s.
Oct. 20	δ Aquarii		22	44	43,27
	Moon	1st Limb	22	47	33,67
	n Piscium		23	38	17,48
21	ψ^3 Aquarii		23	9	11,17
	Moon	1st Limb	23	38	59,61
22	t Piscium		0	15	44,06
	Moon	1st Limb	0	28	25,60
	e Piscium		0	58	39,88
Nov. 17	φ Aquarii		23	4	46,89
	ψ^3 ——		23	9	22,71
	Moon	1st Limb	23	23	24,05
	t Piscium		0	15	57,44
18	Moon	1st Limb	0	12	36,69
	m Ceti		0	43	39,31
	ε Piscium		0	53	27,76
22	Moon	1st Limb	0	27	45,62
	A^1 Tauri		3	54	8,14
	ω^2 ——		4	6	47,09
23	A^1 ——		3	54	9,23
	ω^2 ——		4	6	48,21
	Moon	2nd Limb	4	23	38,42
Dec. 16	m Ceti		0	43	42,30
	Moon	1st Limb	0	45	54,53
17	μ Piscium		1	20	35,09
	γ ——		1	31	53,72
	Moon	1st Limb	1	33	20,55
	ξ^1 Ceti		2	3	18,59
	ξ^2 ——		2	18	26,47
18	ξ^1 ——		2	3	14,95
	ξ^2 ——		2	18	22,81
	Moon	1st Limb	2	21	15,27
	ε Arietis		2	48	47,25
19	δ ——		3	1	8,78
	Moon	1st Limb	3	10	34,98
20	A^1 Tauri		3	53	50,16
	Moon	1st Limb	3	1	54,25
	ω^2 Tauri		4	6	29,17
21	τ ——		4	31	10,42
	Moon	1st Limb	4	55	17,94
1837					
Jan. 17	Moon	1st Limb	4	40	24,70
18	β Tauri		5	17	1,95
	ζ ——		5	28	56,52
	Moon	1st Limb	5	34	37,42
19	k Aurigæ		6	5	58,19
	μ Geminor.		6	14	4,46
	Moon	1st Limb	6	29	50,14
	δ Geminor.		7	11	21,60
	α^2 ——		7	25	10,10
20	δ ——		7	11	18,54
	Moon	1st Limb	7	24	48,93
	6 Cancri		7	54	25,57
21	Moon	Cent.	8	19	32,79
	ρ^4 Cancri		8	46	46,70
	ξ ——		9	0	52,11

Digitized by Google

1837.		Names.		Observed Transit.			1837.		Names.		Observed Transit.		
				h.	m.	s.					h.	m.	s.
Feb.	13	ω^2 Tauri		4	8	13,97	Mar.	27	α Scorpii		16	17	44,87
		υ^1 ——		4	17	9,52			τ ——		16	24	4,09
		Moon	1st Limb	4	21	21,24			Moon	2nd Limb	16	59	26,51
		n Tauri		5	10	5,32			p Sagittarii		17	35	37,07
	14	ι ——		4	53	57,88		28	p ——		17	35	31,34
		n ——		5	10	5,82			γ^2 ——		17	53	33,06
		Moon	1st Limb	5	15	37,09			Moon	2nd Limb	18	4	12,64
		c Tauri		5	43	42,76	April	16	Moon	1st Limb	10	39	5,00
		η Geminor		6	5	39,08			n Leonis		11	6	12,96
	15	c Tauri		5	43	42,05			τ ——		11	18	26,08
		η Geminor		6	5	39,37		18	o Virginis		11	55	43,62
		Moon	1st Limb	6	10	50,37			Moon	1st Limb	12	11	15,79
		ε Geminor		6	34	31,45			γ Virginis		12	32	13,62
	17	β ——		7	35	57,51			δ ——		12	46	13,03
		φ ——		7	44	8,44		19	γ^1 ——		12	32	11,79
		Moon	1st Limb	8	0	13,00			δ ——		12	46	11,28
		δ Cancri		8	36	2,36			Moon	1st Limb	12	58	9,91
		ρ^4 ——		8	46	30,95			α Virginis		13	15	24,48
	18	δ ——		8	36	2,18			ζ ——		13	25	11,10
		ρ^4 ——		8	46	30,55		20	α ——		13	15	22,97
		Moon	1st Limb	8	52	29,17			ζ ——		13	25	9,92
		λ Leonis		9	23	2,01			Moon	Cent.	13	48	14,95
		o ——		9	33	4,26			λ Virginis		14	9	3,90
	19	λ ——		9	23	2,24		25	Moon	2nd Limb	14		
		o ——		9	33	4,35	May	15	ξ^1 Virginis		11	36	37,63
		Moon	1st Limb	9	42	30,76			β ——		11	41	57,00
		γ Leonis		10	11	36,36			Moon	1st Limb	11	51	42,59
	21	χ ——		10	57	15,45		16	η Virginis		12	11	15,91
		ι ——		11	16	4,41			Moon	1st Limb	12	37	40,40
		Moon	2nd Limb	11	18	51,23			θ Virginis		13	1	12,96
		o Virginis		11	57	33,16			α ——		13	16	18,64
Mar.	16	Moon	1st Limb	7	39	57,32		17	θ ——		13	1	10,30
	17	λ Cancri		8	9	52,44			α ——		13	16	16,25
		ϕ^2 ——		8	15	57,80			Moon	1st Limb	13	25	24,35
		Moon	1st Limb	8	31	53,89			k Virginis		14	3	52,11
		ξ Cancri		8	59	1,28			λ ——		14	9	57,23
		q ——		9	8	54,95		23	h^2 Sagittarii		19	26	10,72
	18	ξ ——		8	58	57,76			Moon	2nd Limb	19	35	54,80
		q ——		9	8	51,64		24	ψ Capricorni		20	35	46,51
		Moon	1st Limb	9	22	38,51			Moon	2nd Limb	20	41	9,58
	19	π Leonis		9	50	30,56	June	12	Moon	1st Limb	12	15	52,27
		a ——		9	58	35,96			κ Virginis		12	29	16,90
		Moon	1st Limb	10	11	13,53			δ ——		12	45	50,32
		k Leonis		10	36	41,88		13	Moon	1st Limb	13	1	48,38
		c ——		10	51	12,55			α Virginis		13	15	0,38
	20	k ——		10	36	37,58		14	α ——		13	14	57,47
		c ——		10	51	8,22			Moon	1st Limb	13	50	15,90
		Moon	1st Limb	10	58	8,36			λ Virginis		14	8	38,76
		υ Leonis		11	27	26,64			α^2 Libræ		14	40	13,12
		β Virginis		11	41	2,66		15	λ Virginis		14	8	35,54
	21	υ Leonis		11	27	22,94			Moon	1st Limb	14	42	40,48
		β Virginis		11	41	59,06			γ Libræ		14	52	50,45
		Moon	Cent.	11	45	11,15			β ——		15	6	32,22
		η Virginis		12	10	20,88		21	ψ Capricorni		20	34	25,13

Digitized by Google

1837	Names.		Observed Transit.
			h. m. s.
June 21	ζ Capricorni		21 15 20,04
	Moon	2nd Limb	21 18 12,62
	ι Aquarii		21 55 36,10
23	Moon	2nd Limb	23 14 4,70
24	τ Piscium		23 53 7,21
	Moon	2nd Limb	0 5 32,47
	ι Ceti		0 10 38,41
July 11	α Virginis		13 15 14,62
	Moon	1st Limb	13 29 7,87
	Virginis		14 2 50,67
	λ ——		14 8 56,14
13	α² Libræ		14 40 24.09
	20 ——		14 53 4,61
	Moon	1st Limb	15 12 10,60
	π Scorpii		15 47 32,52
	β¹ ——		15 54 30,36
14	π ——		15 47 29,08
	β¹ ——		15 54 26,86
	Moon	1st Limb	16 11 37,00
	A Ophiuchi		17 3 49,01
	θ ——		17 10 29,43
15	A ——		17 4 37,25
	θ ——		17 10 25,03
	Moon	1st Limb	17 16 52,42
	γ² Sagittarii		17 54 45,23
	δ ——		18 8 58,36
16	γ² ——		17 53 40,77
	δ ——		18 8 53,95
	Moon	1st Limb	18 26 27,22
	τ Sagittarii		18 55 5,88
Aug. 8	Moon	1st Limb	14 0 11,98
	α² Libræ		14 41 29,89
	20 ——		14 54 10,36
9	α² ——		14 41 28,15
	Moon	1st Limb	14 50 45,90
	20 Libræ		14 54 8,74
	k Libræ		15 32 10,20
	b Scorpii		15 40 47,71
10	k Libræ		15 32 8,93
	b Scorpii		15 40 46,35
	Moon	1st Limb	15 46 8,07
	α Scorpii		16 19 0,73
	τ ——		16 25 20,17
11	α ——		16 18 59,27
	τ ——		16 25 18,69
	Moon	1st Limb	16 47 2,86
	θ Ophiuchi		17 11 34,35
	γ² Sagittarii		17 54 55,80
12	θ Ophiuchi		17 11 32,77
	Moon	1st Limb	17 53 6,26
	γ² Sagittarii		17 54 53,40
	φ ——		18 35 1,31
	σ ——		18 44 42,38
13	φ Sagittarii		18 35 59,71

1837	Names.		Observed. Transit.
			h. m. s.
Aug. 13	Moon	1st Limb	19 2 16,36
20	o Piscium		1 36 8,09
	γ¹ Arietis		1 43 56,18
	Moon	2nd Limb	1 58 25,88
	ε Arietis		2 49 14,24
21	π ——		2 39 30,21
	Moon	2nd Limb	2 51 12,53
	g Arietis		3 13 59,28
	η Tauri		3 37 5,83
22	g Arietis		3 13 58,30
	η Tauri		3 37 4,87
	Moon	2nd Limb	3 45 20,55
	υ¹ Tauri		4 15 50,06
23	Moon	2nd Limb	4 40 57,52
Sep. 9	λ Sagittarii		18 16 48,50
	Moon	1st Limb	18 31 34,67
	π Sagittarii		18 58 57,58
	h² ——		19 25 40,86
12	ζ Capricorni		21 16 9,59
	δ ——		21 36 50,65
	Moon	1st Limb	21 47 21,92
13	σ Aquarii		22 20 46,81
	δ ——		22 44 45,77
	Moon	1st Limb	22 46 24,36
14	ψ³ Aquarii		23 9 12,22
	n Piscium		23 38 17,04
	Moon	2nd Limb	23 44 41,56
	n Ceti		0 20 26,43
	δ Piscium		0 38 57,03
15	n Ceti		0 20 24,07
	Moon	2nd Limb	0 38 43,56
	μ Piscium		1 20 19,36
	ν ——		1 31 37,50
16	μ ——		1 20 16,30
	Moon	2nd Limb	1 32 6,86
	ξ¹ Ceti		2 2 59,07
	ν Arietis		2 28 11,46
17	ξ¹ Ceti		2 2 57,53
	Moon	2nd Limb	2 26 0,30
	δ Arietis		3 0 54,49
	g ——		3 13 17.10
18	δ ——		3 0 52,99
	g ——		3 13 15,34
	Moon	2nd Limb	3 21 7.74
	A¹ Tauri		3 53 37,56
	υ¹ ——		4 15 7,11
19	A¹ Tauri		3 53 35,70
	υ¹ ——		4 14 5,41
	Moon	2nd Limb	4 17 43,20
	ν Tauri		4 51 51,07
	β ——		5 14 30,80
20	β ——		5 14 29,09
	Moon	2nd Limb	5 15 22,79
	c Tauri		5 41 34,29

Digitized by Google

1837.	Names.		Observed Transit.	1837.	Names.		Observed Transit.
			h. m. s.				h. m. s.
Sept. 21	C Tauri		5 41 32,93	Oct. 13	Piscium		1 20 46,00
	k Aurigæ		6 3 27,21		γ^1 Arietis		1 42 35,69
	Moon	2nd Limb	6 13 7,87	Nov. 6	ε Capricorni		21 24 42,45
	ε Geminor.		6 32 21,52		δ ——		21 34 47,74
Oct. 9	η Capricorni		20 53 10,90		Moon	1st Limb	21 57 38,79
	ζ ——		21 15 24,88		δ Aquarii		22 18 46,53
	Moon	1st Limb	21 20 21,67		λ ——		22 40 52,00
	ι Aquarii		21 55 41,35	7	σ ——		22 18 45,02
	θ ——		22 6 17,27		λ ——		22 40 50,69
10	θ ——		22 6 16,07		Moon	1st Limb	22 52 34,96
	Moon	1st Limb	22 18 58,34		n Piscium		23 36 18,13
	λ Aquarii		22 42 8,91	Dec. 14	α^2 Geminor.		7 23 21,05
	ψ^3 ——		23 8 31,28		k ——		7 33 45,12
12	n Piscium		23 37 34,20		Moon	2nd Limb	7 51 25,51
	τ ——		23 51 36,41		φ^2 Cancri		8 16 4,23
	Moon	1st Limb	0 8 33,43	16	q Cancri		9 8 56,45
	* Piscium		0 37 50,63		λ Leonis		9 21 28,49
	ε ——		0 52 29,60		Moon	2nd Limb	9 34 47,61
13	* ——		0 37 50,12		α Leonis		9 58 2,27
	ε ——		0 52 29,12		γ ——		10 10 2,15
	Moon	1st Limb	1 1 45,73				

OBSERVATION OF THE ECLIPSES OF JUPITER'S SATELLITES *in the Years* 1836 *and* 1837.

1836.	Satellite.	Im. or Em.	Telescope.	Power.	Madras Mean Time.	Remarks.
					h. m. s.	
Jan. 27	II	Emersion.	5 feet.	110	8 10 54,3	
Feb. 1	I	Emersion.	5 feet.	150	7 56 28,3	
3	II	Emersion.	5 feet.	110	10 47 15,9	
15	I	Emersion.	42 inches.	75	11 46 49,6	
27	III	Immersion.	5 feet.	110	6 35 20,4	
27	III	Emersion.	5 feet.	110	9 48 27,2	
28	II	Emersion.	42 inches.	75	8 0 22,6	
Mar. 2	I	Emersion.	5 feet.	110	10 5 27,8	
5	III	Immersion.	5 feet.	110	10 32 57,9	
6	II	Emersion.	5 feet.	110	10 33 14,3	
9	I	Emersion.	5 feet.	110	12 0 59,1	
18	I	Emersion.	5 feet.	150	8 25 15,6	
25	I	Emersion.	5 feet.	110	10 20 41,6	Moon near the Planet.
29	IV	Emersion.	5 feet.	150	8 39 35,8	
31	II	Emersion.	5 feet.	150	7 41 19,2	
April 10	I	Emersion.	5 feet.	110	8 40 40,3	
10	III	Emersion.	5 feet.	110	9 53 28,6	
17	III	Immersion.	5 feet.	110	10 33 49,7	Planet low. Clear—observation satisfactory.

Digitized by Google

1836.		Satellite.	Im. or Em.	Telescope.	Power.	Madras Mean Time.	Remarks.
						h. m. s.	
April	17	I	Emersion.	5 feet.	110	10 36 54,2	Planet low. Clear observation satisfactory.
May	19	I	Emersion.	42 inches.	75	7 17 1,7	
Oct.	12	II	Immersion.	5 feet.	480	15 49 2,9	
	13	III	Immersion.	42 inches.	75	14 13 5,6	
Nov.	6	II	Immersion.	42 inches.	75	12 49 10,1	
	25	III	Immersion.	5 feet.	110	14 1 23,6	
	25	III	Emersion.	5 feet.	110	17 32 11,7	
Dec.	1	I	Immersion.	5 feet.	110	15 47 30,0	
	5	IV	Emersion.	5 feet.	110	16 8 20,6	
	10	I	Immersion.	5 feet.	110	12 8 40,6	
	17	I	Immersion.	5 feet.	110	14 2 39,6	
	26	I	Immersion.	5 feet.	110	10 24 13,6	
1837.							
Jan.	9	I	Immersion.	5 feet.	110	14 9 37,3	
	11	I	Immersion.	5 feet.	60	8 38 7,8	Unsatisfactory; planet near the horizon.
Feb.	10	I	Emersion.	5 feet.	110	12 57 20,5	
	10	II	Emersion.	5 feet.	110	14 49 40,0	Dew rapidly deposited on the O. G.
	12	I	Emersion.	5 feet.	110	7 25 50,4	good observation.
	12	III	Emersion.	5 feet.	110	13 13 43,5	good observation.
	17	I	Emersion.	5 feet.	110	14 51 6,9	very good obs.
	19	I	Emersion.	42 inches.	75	9 19 35,3	The proximity of the Moon unfavorable.
	21	II	Emersion.	5 feet.	110	6 44 31,3	very good obs.
	26	I	Emersion.	5 feet.	110	11 14 2,1	good observation.
	27	IV	Emersion.	5 feet.	110	10 13 58,6	
Mar.	7	I	Emersion.	5 feet.	110	7 36 53,9	} good observations.
	7	I	Emersion.	42 inches.	70	7 36 54,9	
	7	II	Emersion.	5 feet.	110	11 58 36,2	} good observations.
	7	II	Emersion.	42 inches.	70	11 58 41,2	
	7	I	Emersion.	5 feet.	70	9 31 24,3	} good observations.
	7	I	Emersion.	42 inches.	110	9 31 31,3	
	14	II	Emersion.	42 inches.	110	14 35 48,1	good observation.
	20	III	Emersion.	5 feet.	110	9 8 18,6	
	21	I	Emersion.	5 feet.	110	11 25 48,7	
	25	II	Emersion.	5 feet.	60	6 32 54,2	good observation.
	27	III	Emersion.	5 feet.	60	13 5 26,4	haze.
	28	I	Emersion.	5 feet.	60	13 20 21,1	haze,—planet low.
April	1	II	Emersion.	5 feet.	60	9 8 53,2	very good obs.
	6	I	Emersion.	5 feet.	60	9 43 31,4	
	18	IV	Immersion.	5 feet.	110	11 36 54,2	
	22	I	Emersion.	5 feet.	60	8 2 39,4	
	29	I	Emersion.	5 feet.	140	9 58 5,3	very good obs.

Digitized by Google

1837.		Satellite.	Im. or Em.	Telescope.	Power.	Madras Mean Time.	REMARKS.
						h. m. s.	
May	2	III	Emersion.	5 feet.	110	9 4 27,5	
	3	II	Emersion.	5 feet.	110	1 54 30,2	
	5	IV	Emersion.	5 feet.	110	10 22 45,2	
	9	III	Immersion.	5 feet.	110	9 31 17,1	
	15	I	Emersion.	5 feet.	100	8 15 59,4	
Dec.	16	II	Immersion.	5 feet.	60	16 24 5,3	
	17	III	Immersion.	5 feet.	110	12 47 22,4	
	17	III	Emersion.	5 feet.	110	16 12 8,2	
	29	I	Immersion.	5 feet.	110	13 25 8,3	

Occultation of Stars by the Moon.

Date		Observation	Madras Mean Time. h. m. s.
1836			
March	23	Immersion of *Tauri* behind the Moon's dark limb, observed with 5 feet Achromatic power 60.................. at	8 6 32,7
Oct.	13	Immersion of δ *Scorpii* behind the Moon's dark limb, observed with 5 feet Achromatic power 110................at	6 32 41,3
	15	Immersion of a star in *Sagittarius* behind the Moon's dark limb, observed with 42 inch, power 75.......... .....at	6 48 19,1
1837			
Jan.	4	Immersion of A *Ophiuchi* behind the Moon's enlightened limb, observed with 5 feet Achromatic power 110...........at	17 42 39,5
March	9	Immersion of *o Piscium* behind the Moon's dark limb, observed with 5 feet Achromatic power 110............at	6 59 34,3
	*10	Immersion of a small star behind the Moon's dark limb, observed with 5 feet Achromatic power 110.............at	7 6 37,0
	†11	Immersion of a small star behind the Moon's dark limb, observed with 5 feet Achromatic power 60 .... at	8 48 15,5
April	12	Immersion of *v Geminorum* behind the Moon's dark limb, observed with 5 feet Achromatic power 110.... ..... at	10 10 19,7

LUNAR ECLIPSES.

Observation of the Eclipse of the Moon on the 24th October 1836.

	Madras Mean Time. h. m. s.
Beginning of the Eclipse............................	6 0 37,9
End of the Eclipse................................	7 15 25,7

* I was watching the approach of this star to the Moon's dark border, when my atttention was arrested by the appearance of a nebulosity, about as bright as a star of the 6th magnitude,—situated upon the Moon's disc, at about 4 minutes from the unenlightened edge;—on referring to a chart of the Moon, the phenomenon evidently proceeded from the spot Aristarchus; I have frequently looked for this appearance during the early age of the Moon, but have never before seen any thing to compare with the brilliancy which I have this evening witnessed.

† The same appearance continues.

Digitized by Google

The state of the air was unfavorable for accurate observations, in consequence of which, these times are little to be depended upon. Observed with 5 feet Achromatic power 60.

Observation of the Eclipse of the Moon on the 20th April 1837.

	Madras Mean Time. h.	m.	s.
Beginning of the Eclipse	11	10	50,6
Touches Grimaldus		12	30,3
Covers do.		13	53,1
Covers Gallilius		17	36,5
Covers Aristarchus		28	3,8
Touches Tycho		34	51,7
Covers do.		35	46,5
Touches Plato		48	56,3
Covers do.		50	16,1
No. 28 disappeared		52	53,7
Censorinus do.		57	17,0
Proclus do.	12	5	53,6
Touches Mare Christium		6	45,5
Covers do. do.		10	1,0
Totally Eclipsed		11	46,6
End of total darkness	14	49	26,7
Covers Grimaldus		55	13,7
Leaves do.		56	17,5
Leaves Aristarchus	15	2	34,5
Tycho covered		18	9,9
Leaves Tycho		19	7,
End of the Eclipse		50	46,8

The Earth's shadow was exceedingly well defined, and the air particularly clear: the times of beginning and end as well as those of contact with the various spots, are I believe, as accurate as observations of this nature will permit; but the times of "Totally Eclipsed," and "End of total darkness,"—from the rapidity with which the last thread of light was dissolved and formed, are by far the most accurate portion of the observations; these cannot I think be more than two seconds in error—

Observed with the 5 feet Achromatic with a power of 60.

Observation of the Eclipse of the Moon on the 13th October 1837.

	Madras Mean Time h.	m.	s.
Beginning of the Eclipse	14	52	18,6
First total Immersion in dark shadow	15	52	18,8
Last total Immersion in dark shadow	17	22	3,9

This observation was made during my absence from Madras—by *Ragavachariar*, the head assistant; he states that flying clouds prevented very accurate observation—

Observed with 5 feet Achromatic power 60.

Observed North Polar Distance of the Planet Mars and of Stars situated near to his path at the opposition of 1837.

1837.	Names.	Madras Mean Time.	Bar.	Thermometer. in	Thermometer. out	Observed N. P. D.	Remarks.
		h. m.	Inches.	°	°	° ′ ″	
Jan. 26	♂ Centrum	13 16,7	30,050	71,2	66,7	71 20 27,8	
	* x					71 12 6,2	
	η Leonis					72 27 31,2	
27	* w		30,066	71,0	67,0	71 8 48,5	
	♂ Centrum	13 11,4				71 12 20,8	
	η Leonis		30,050	71,0	76,0	72 27 30,3	
28	* p		30,096	74,0	71,7	71 0 37,0	
	♂ Centrum	13 6,0	30,064	72,4	69,0	72 27 31,7	
	η Leonis					71 4 11,9	
29	* q		30,128	75,2	73,7	70 53 16.0	
	♂ Centrum	13 0,6				70 56 6,4	
	η Leonis					72 27 30,3	
31	♂ Centrum	12 49,6	30,110	74,8	71,0	70 39 59,4	
	* t					70 35 1,3	
	η Leonis		30,094	74,8	69,8	72 27 31,7	
Feb. 2	* k		30,100	73,5	68,6	70 15 19,2	
	♂ Centrum	12 38,6				70 24 7,7	
	η Leonis		30,090	72,0	68,0	72 27 31,7	
3	* k		30,144	75,6	70,6	70 15 17,9	
	♂ Centrum	12 33,2	30,126	74,7	70,0	70 16 20,6	
	η Leonis		30,124	74,5	69,7	72 27 32,0	
4	* l		30,114	75,0	73,0	70 1 16,7	
	♂ Centrum	12 27,6	31,102	74,0	72,3	70 8 38,4	
5	δ Cancri		30,032	74,2	70,6	71 15 52,5	
	* n					69 50 37,2	
	♂ Centrum	12 22,1	30,010	74,0	69,7	70 1 5,1	
6	δ Cancri		30,024	74,2	71,7	71 15 52,4	
	* n		30,020	74,0	70,0	69 50 36,6	
	♂ Centrum	12 16,6		73,8		69 53 39,5	
7	δ Cancri		30,072	76,0	74,3	71 15 52,6	
	♂ Centrum	12 11,1	30,064	75,8	73,7	69 46 22,1	
	* r					69 41 18,0	
8	δ Cancri		30,116	76,0	74,3	71 15 53,1	
	* 1141 A. S. C.					69 31 36,9	
	♂ Centrum	12 5,5	30,084	76,0	73,7	69 39 16,2	
9	δ Cancri		30,094	75,3	72,0	71 15 52,7	
	* 1141 A. S. C.					69 31 36,1	
	♂ Centrum	12 0,0	30,078	75,0	72,0	69 32 22,2	
10	δ Cancri		30,092	77,2	75,5	71 15 51,3	
	♂ Centrum	11 54,5	30,080	76,9	75,2	69 25 39,8	
	* o		30,070	76,5	74,0	69 17 24,8	
11	δ Cancri		30,012	77,5	74,6	71 15 51,2	
	♂ Centrum	11 49,0				69 19 10,2	
	* o		29,944	77,0	74,0	69 17 24,6	
12	δ Cancri		29,994	78,0	76,6	71 15 51,2	

Digitized by Google

Observed North Polar Distance, of Mars, &c. continued.

1837	Names.	Madras Mean Time.	Barometer.	Thermometer in	Thermometer out	Observed N. P. D.	Remarks.
		h. m.	Inches.	°	°	° ′ ″	
Feb. 12	♂ Centrum	11 43,5				69 12 54,0	
	* m			77,7	76,0	69 10 6,5	
13	δ Cancri		30,056	79,7	79,8	71 15 51,5	
	♂ Centrum	11 38,0				69 6 51,0	
	* i		30,046	79,4	79,5	68 57 23,5	
14	γ Cancri		30,110	79,5	77,6	67 57 46,9	
	♂ Centrum	11 32,6				69 1 3,3	
	* i					68 57 26,6	
15	γ Cancri		30,130	78,2	77,0	67 57 47,4	
	♂ Centrum	11 27,1	30,120			68 55 32,6	
	* h					68 47 0,0	
17	γ Cancri		30,160	78,2	76,2	67 57 47,8	
	* e					68 40 19,4	
	♂ Centrum	11 16,3			76,0	68 45 13,7	
18	γ Cancri		30,140	78,5	75,0	67 57 47,2	
	♂ Centrum	11 11,0	30,136	78,3	74,0	68 40 27,1	
19	γ Cancri					67 57 46,4	
	♂ Centrum	11 5,7				68 36 58,9	
	* g		30,110	76,0	72,0	68 30 58,3	
20	γ Cancri		30,152	76,8	72,0	67 57 48,2	
	♂ Centrum	11 0,4				68 31 46,7	
	* g					68 31 5,2	
21	γ Cancri		30,186	78,1	75,0	67 57 47,9	
	♂ Centrum	10 55,2	30,184	77,9	76,2	68 27 49,6	
	* f					68 26 20,9	
26	γ Cancri		30,044	78,0	75,3	67 57 45,1	
	* b					68 13 4,3	
	♂ Centrum	10 29,4				68 12 12,8	
27	γ Cancri		30,034	77,9	74,3	67 57 45,8	
	♂ Centrum	10 24,4				68 9 53,3	
28	γ Cancri		30,078	78,2	74,8	67 57 45,4	
	* a					68 13 6,6	Observed by mistake.
	♂ Centrum	10 19,5				68 7 50,4	
Mar. 1	γ Cancri		30,116	78,2	77,3	67 57 44,1	
	* a					68 13 6,6	
	♂ Centrum	10 14,6				68 6 2,9	
4	γ Cancri		30,096	79,7	78,8	67 57 44,4	
	* a					68 2 21,6	
	♂ Centrum	10 0,3		79,5	78,6	68 2 16,1	
5	γ Cancri		30,116	80,2	77,5	67 57 43,8	
	* a					68 2 22,1	
	♂ Centrum	9 55,6				68 1 31,1	
6	γ Cancri		30,120	79,5	76,5	67 57 43,7	
	♂ Centrum	9 51,0				68 1 0,2	
	* a					68 2 22,0	
7	γ Cancri		30,116	80,0	76,9	67 57 43,1	

Digitized by Google

Observed North Polar Distance, of Mars, &c. continued.

1837.	Names.	Madras Mean Time.	Bar.	Thermometer. in	Thermometer. out	Observed N. P. D.	Remarks.
		h. m.	Inches.	°	°	° ′ ″	
Mar. 7	♂ Centrum	9 46,4				68 0 44,3	
	• a					68 2 19,3	
8	γ Cancri		30,106	79,9	78,0	67 57 42,6	
	♂ Centrum	9 41,9				68 0 43,3	
	• a					68 2 20,0	
9	γ Cancri		30,124	79,9	77,7	67 57 43,5	
	♂ Centrum	9 37,4				68 0 55,7	
	• a					68 2 20,4	
10	γ Cancri		30,072	79,7	78,5	67 57 41,7	
	♂ Centrum	9 33,0				68 1 23,2	
	• a					68 2 20,2	
11	γ Cancri		30,024	80,3	80,2	67 57 42,6	
	♂ Centrum	9 28,7				68 2 3,3	
12	γ Cancri		30,076	80,2	79,7	67 57 41,4	
	♂ Centrum	9 24,4				68 2 58,4	
13	γ Cancri		30,076	81,0	79,0	67 57 43,4	
	♂ Centrum	9 20,2				68 4 5,7	
	• a					68 2 18,9	
14	γ Cancri		29,990	81,8	80,0	67 57 42,2	
	♂ Centrum	9 16,0				68 5 24,5	
	• a		29,986	80,5	79,8	68 2 23,4	
15	γ Cancri		29,960	80,6	79,5	67 57 42,4	
	♂ Centrum	9 10,7				68 6 57,8	
	• b		29,958		79,0	68 13 2,9	
16	γ Cancri		30,000	80,5	79,6	67 57 43,3	
	♂ Centrum	9 7,6				68 8 40,5	
	• b					68 13 4,1	
17	♂ Centrum	9 3,5	30,044	80,4	80,0	68 10 37,4	
	• b					68 13 3,3	
18	γ Cancri		30,054	80,7	78,2	67 57 42,6	
	♂ Centrum	8 59,4				68 12 45,7	
	• b					68 13 2,8	
19	γ Cancri		29,998	82,3	81,8	67 57 42,3	
	♂ Centrum	8 55,5				68 15 1,2	
	• b		30,010		81,2	68 13 4,2	
20	♂ Centrum	8 51,6	29,990	82,0	80,0	68 17 34,1	

The above observations have been given here—out of their proper place—to enable me (without loss of time) to avail myself of the corresponding observations made at the Cape of Good Hope Observatory, with which, through the kindness of the Astronomer Royal I have just been favoured : thus, putting p', p'', &c. to represent the equatoreal horizontal parallax of the Planet *Mars;* and computing the values of dr, (the differance of refraction between the Planet and Star) and $\Delta\ \delta$, the change of Declination in the interval occupied by the Planet in passing from one meridian to the other, we get

Observed North Polar Distance of Mars, &c.

1837.	Names.	Madras Observations. Observed diff.	dr.	P		Cape of Good Hope Observations. Observed diff.	dr.	P	Δδ
		° ′ ″	″			° ′ ″	″		′ ″
Jan. 26	♂ Cent. & *x* Leonis	0 8 21,6	+0,13 *r*	+ ,0990p	=	0 6 47,13	+0,21	+ ,7963p	+ 1 23,51
	♂ —— & *η* ——	1 7 3,4	1,12	— ,0990	=	1 8 24,41	1,82	— ,7963	— 1 23,51
27	♂ —— & *ω* ——	0 3 32,3	0,07	+ ,1013p^{i}	=	0 1 56,86	0,05	+ ,7978p^{i}	+ 1 23,51
	♂ —— & *η* ——	1 15 9,5	1,25	— ,1013	=	1 16 44,33	0,41	— ,7978	— 1 23,51
28	♂ —— & P ——	0 3 34,9	0,07	+ ,1037p^{ii}	=	0 2 2,04	0,06	+ ,7992p^{ii}	+ 1 23,61
	♂ —— & *η* ——	1 23 20,8	1,37	— ,1037	=	0 24 50,02	0,65	— ,7992	— 1 23,61
Feb. 5	♂ —— & *n* Cancri	0 10 27,9	0,17	+ ,1219p^{iii}	=	0 9 1,32	0,24	+ ,8100p^{iii}	+ 1 17,00
6	♂ —— & *δ* ——	1 22 12,9	1,36	— ,1242p^{iv}	=	1 23 37,61	2,12	— ,8114p^{iv}	— 1 15,46
	♂ —— & *n* ——	0 3 2,9	0,07	+ ,1242	=	0 1 37,26	0,04	+ ,8114	+ 1 15,46
7	♂ —— & *δ* ——	1 29 30,5	1,47	— ,1262p^{v}	=	1 30 53,98	2,31	— ,8128p^{v}	— 1 13,77
	♂ —— & *r* ——	0 5 4,1	0,08	+ ,1262	=	0 3 48,67	0,10	+ ,8128	+ 1 13,77
8	♂ —— & *δ* ——	1 36 36,9	1,60	— ,1282p^{vi}	=	1 37 55,50	2,48	— ,8141p^{vi}	— 1 11,81
9	♂ —— & *δ* ——	1 43 30,5	1,71	— ,1302p^{vii}	=	1 44 48,36	2,66	— ,8149p^{vii}	— 1 9,78
11	♂ —— & *δ* ——	1 56 41,0	1,91	— ,1340p^{viii}	=	1 57 52,81	2,93	— ,8171p^{viii}	— 1 5,37
	♂ —— & *o* ——	0 1 45,6	0,02	+ ,1340	=	0 0 30,61	0,01	+ ,8171	+ 1 5,37
12	♂ —— & *δ* ——	2 2 57,2	2,33	— ,1360p^{ix}	=	2 4 4,60	3,14	— ,8183p^{ix}	— 1 3,03
	♂ —— & *m* ——	0 2 47,5	0,04	+ ,1360	=	0 1 35,53	0,04	+ ,8183	+ 1 3,03
14	♂ —— & *γ* ——	1 3 16,4	1,04	+ ,1392p^{x}	=	1 2 2,75	1,57	+ ,8101p^{x}	+ 0 57,99
	♂ —— & *i* ——	0 3 36,7	0,07	+ ,1392	=	0 2 32,20	0,08	+ ,8201	+ 0 57,99
15	♂ —— & *γ* ——	0 57 45,2	0,92	+ ,1423p^{xi}	=	0 56 35,63	1,41	+ ,8220p^{xi}	+ 0 55,40
	♂ —— & *h* ——	0 8 32,6	0,14	+ ,1423	=	0 7 24,60	0,17	+ ,8220	+ 0 55,40
18	♂ —— & *γ* ——	0 42 39,9	0,69	+ ,1452p^{xii}	=	0 41 44,53	1,01	+ ,8236p^{xii}	+ 0 47,34
20	♂ —— & *γ* ——	0 33 58,5	0,54	+ ,1478p^{xiii}	=	0 33 9,15	0,81	+ ,8251p^{xiii}	+ 0 41,80
	♂ —— & *g* ——	0 0 41,5	0,00	+ ,1478	=	0 0 4,97	0,00	+ ,8251	— 0 41,80
21	♂ —— & *γ* ——	0 30 1,7	0,53	+ ,1490p^{xiv}	=	0 29 15,17	0,70	+ ,8258p^{xiv}	+ 0 39,00
	♂ —— & *f* ——	0 1 28,7	0,02	+ ,1490	=	0 0 43,58	0,01	+ ,8258	+ 0 39,00
28	♂ —— & *γ* ——	0 10 5,0	0,25	+ ,1547p^{xv}	=	0 9 36,10	0,22	+ ,8290p^{xv}	+ 0 19,40
Mar. 4	♂ —— & *γ* ——	0 4 37,2	0,08	+ ,1561p^{xvi}	=	0 4 15,89	0,11	+ ,8298p^{xvi}	+ 0 8,73
	♂ —— & *a* ——	0 0 5,5	0,00	— ,1561	=	0 0 21,09	0,00	— ,8298	— 0 8,73
6	♂ —— & *a* ——	0 1 21,8	0,02	— ,1564p^{xvii}	=	0 1 33,53	0,03	— ,8300p^{xvii}	— 0 3,70
7	♂ —— & *γ* ——	0 3 1,2	0,07	+ ,1567p^{xviii}	=	0 2 52,17	0,06	+ ,8302p^{xviii}	+ 0 1,22
	♂ —— & *a* ——	0 1 35,0	0,02	— ,1567	=	0 1 44,53	0,04	+ ,8302	+ 0 1,22
10	♂ —— & *γ* ——	0 3 41,5	0,07	+ ,1564p^{xix}	=	0 3 39,06	0,09	+ ,8300p^{xix}	+ 06,01
	♂ —— & *a* ——	0 0 57,0	0,01	— ,1564	=	0 0 57,80	0,02	— ,8300	+ 06,01
12	♂ —— & *γ* ——	0 5 17,0	0,08	+ ,1561p^{xx}	=	0 5 17,39	0,11	+ ,8298p^{xx}	— 0 10,59
13	♂ —— & *γ* ——	0 4 22,6	0,08	+ ,1556p^{xxi}	=	0 6 25,31	0,14	+ ,8295p^{xxi}	— 0 12,79
	♂ —— & *a* ——	0 1 46,8	0,02	— ,1556	=	0 1 47,64	0,10	— ,8295	+ 0 12,79
18	♂ —— & *γ* ——	0 15 3,1	0,25	+ ,1533p^{xxii}	=	0 15 18,25	0,34	+ ,8282p^{xxii}	— 0 22,80
	♂ —— & *b* ——	0 0 17,1	0,00	— ,1533	=	0 0 8,16	0,00	— ,8282	+ 0 22,80
19	♂ —— & *γ* ——	0 17 18,9	0,26	+ ,1524p^{xxiii}	=	0 17 36,01	0,39	+ ,8277p^{xxiii}	— 0 24,91
	♂ —— & *b* ——	0 1 57,0	0,02	+ ,1524	=	0 2 17,09	0,05	+ ,8277	— 0 24,91

Resolving the above equations, and employing the log. distance of the Planet from the Earth—furnished in the Nautical Almanac—for the moment intermediate between the transit of the Planet over the two Observatories ; we get π, the Equatoreal Horizontal Parallax of the Sun.

		″				″		
Jan.	26	10,88	=	,6973 p	$\therefore p$	=15,61	or π =10,68	Probably another Star instead of x has been observed by one or the other.
		1,81		,6973 p		=		
	27	11,95		,6965 p^{i}		=17,16	=14,71	
		10,58		,6965 p^{i}		=15,20	=10,37	
	28	9,26		,6955 p^{ii}		=13,31	= 9,05	
		4,89		,6955 p^{ii}		= 7,03	= 4,78	
Feb.	5	9,51		,6881 p^{iii}		=13,82	= 9,31	
	6	10,01		,6872 p^{iv}		=14,57	= 9,82	
		10,21		,6872 p^{iv}		=14,86	=10,02	
	7	10,67		,6866 p^{v}		=15,54	=10,49	r badly observed either at Madras or the Cape.
		1,64		,6866 p^{v}				
	8	7,67		,6859 p^{vi}		=11,18	= 7,55	
	9	9,03		,6847 p^{vii}		=13,19	= 8,92	
	11	7,46		,6831 p^{viii}		=10,92	= 7,41	
		10,24		,6831 p^{viii}		=14,99	=10,18	
	12	5,18		,6823 p^{ix}		= 7,59	= 5,17	
		8,94		,6823 p^{ix}		=13,10	= 9,12	
	14	8,13		,6809 p^{x}		=11,94	= 8,17	
		6,47		,6809 p^{x}		= 9,50	= 6,65	
	15	13,68		,6807 p^{xi}		=20,09	=13,80	
		12,57		,6807 p^{xi}		=18,47	=12,68	
	18	7,71		,6784 p^{xii}		=11,37	= 7,89	
	20	7,28		,6773 p^{xiii}		=10,75	= 7,53	
		4,67		,6773 p^{xiii}		= 6,89	= 4,83	
	21	7,36		,6768 p^{xiv}		=10,87	= 7,66	
		6,14		,6768 p^{xiv}		= 9,07	= 6,39	
	28	9,53		,6743 p^{xv}		=14,13	=10,37	
Mar.	4	12,36		,6737 p^{xvi}		=18,34	=13,85	
		6,86		,6737 p^{xvi}		=10,18	= 7,69	
	6	8,01		,6736 p^{xvii}		=11,89	= 9,11	
	7	7,82		,6735 p^{xviii}		=11,61	= 8,96	
		8,13		,6735 p^{xviii}		=12,07	= 9,31	
	10	8,43		,6736 p^{xix}		=12,51	= 9,89	
		6,33		,6736 p^{xix}		= 9,40	= 7,42	
	12	10,17		,6737 p^{xx}		=15,10	=12,13	
	13	10,02		,6739 p^{xxi}		=14,87	=12,04	
		13,71		,6739 p^{xxi}		=20,35	=16,48	The Madras Obs. of a is too small.
	18	7,56		,6749 p^{xxii}		=11,20	= 9,46	
		13,86		,6749 p^{xxii}		=20,54	=17,34	The Cape Obs. of a is too small.
	19	7,67		,6753 p^{xxiii}		=11,36	= 9,67	
		4,79		,6753 p^{xxiii}		= 7,09	= 6,04	The Cape Obs. of a is too large.

Digitized by Google

Mean =	9,″486
Whereas from a similar series of observations at the opposition of 1832-33 we obtained for π	9 ,912
Do. Do. 1834-35	8 ,595
Giving to each series the same weight, we obtain the mean Equatoreal Hor. Pa. of the Sun, or π =	9 ,331

OBSERVATIONS OF THE FIXED STARS.

THE observations of the Fixed Stars in 1836 & 1837 have been principally confined to a Catalogue of 2070 Stars, which, with those given in Vols. II. & III. completes the re-observation of Piazzi's Catalogue. It was my intention in 1836 to have made four observations of each Star at each Instrument—two in the first year, and two in the second, whereby any error in the observation or reduction would readily be detected;—this plan has for the most part been accomplished,—the principal deviation therefrom being in the hours XX & XXI, where, having to encounter a large number of Stars (from 140—150 in each hour) and that too at a time of the year little favorable to Observation,—I have been unable to make more than two or three, and in some cases only one observation of each Star; but, taking in to account, the accuracy to which each single observation may lay claim, I have thought it proper, rather to give this single observation, than to omit the Star from the Catalogue. The Magnitudes are from the mean of all the observations at both instruments, save that in the case where half a magnitude had to be decided between the two instruments, I have given it in favour of the Transit, as being derived from the better instrument of the two, and from the most skilful observers. The Corrections which have been employed, are those resulting from the values of a, b, c, d, of the Catalogue, in conjunction with the values of A, B, C, D, given in the Nautical Almanac;—these values of a, b, c, *&c.* have been computed for the year 1840, by applying to the A.R. and Declination given in Piazzi's Catalogue—the amount of 40 times the annual precession there given, whereby the places for 1840, are for *this purpose* obtained to a sufficient degree of accuracy. The formulæ employed (which has been explained at full length by Mr. Bailly in the appendix to the second volume of the Memoirs of the Royal Astronomical Society), is as follows

Digitized by Google

$$a = + \; \cos\alpha \, . \sec\delta$$
$$b = + \; \sin\alpha \, . \sec\delta$$
$$c = + \; 46''024 + 20'',042 \sin\alpha \, . \tan\delta$$
$$d = + \; \cos\alpha \, . \tan\delta$$
$$a' = + \; \tan\omega \, . \cos\delta - \sin\alpha \, . \sin\delta$$
$$b' = + \; \cos\alpha \, . \sin$$
$$c' = + \; 20'',042 \cos\alpha .$$
$$d' = - \; \sin\alpha .$$

and the values of A, B, C, D from the Nautical Almanac are computed from the formulæ

$$A = - 18'',6768 \cos . \odot$$
$$B = - 20'',3600 \sin . \odot$$
$$C = t - 0'',02495 \sin . 2 \odot - 0,34362 \sin . \Omega + 0,00413 \sin . 2 \Omega - 0,004 \sin . 2 ☾$$
$$D = - 0'',54470 \cos . 2 \odot - 9'',25000 \cos . \Omega + 0'',09030 \cos . 2 \Omega - 0'',090 \cos . 2 ☾$$

from which we deduce

$$\text{Apparent A. R. } in\ arc. = \alpha + A\,a + B\,b + C\,c + D\,d.$$
$$\text{Apparent Declination} = \delta + A\,a' + B\,b' + C\,c' + D\,d' .$$

where t denotes the time from the beginning of the year, α represents the A. R. of the Star, δ its Declination, and ω the Obliquity of the ecliptic. To guard against mistakes, the computations of these values as well as the places for 1840—have all been performed in duplicate, thus;—when the first computation had once been completed, the resulting values properly arranged —where neatly registered in a book which it was intended should be eventually employed in the ulterior computations, and the said book together with the details of the computation carefully locked up;—the computation was now again gone over anew, the results carefully compared with those registered in the fair book, and the discrepancies set right by a re-examination of each of the orginal computations; when the error, if occurring in the first computation, was rectified by neatly erasing the erroneous figures in the fair book: in the examination of the press, the proof sheet has always been compared with this orginal document, by which means, errors (with the exception of those given in the errata) have I hope been completely avoided.

Digitized by Google

Digitized by Google

A

SUBSIDIARY CATALOGUE (No. 2.)

OF

THE FIXED STARS

REDUCED TO JANUARY 1, 1836.

Together with the values of *a, b, c, d,* &c.

COMPUTED FOR THE YEAR 1840.

&c.

Digitized by Google

No.	Star's name and Mag.			No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of			
							a	*b*	*c*	*d*
					h. m. s.	*s.*				
1		Andromedæ	7.8	6	0 1 59,87	+3,074	+8,8770	+6,8593	+0,4877	+8,5453
2		Ceti	9	4	2 0,62	3 065	,8346	6,8169	,4864	-8,1762
3		———	*var*	4	2 46,05	3,067	,8250	6,9323	,4867	-7,6915
4	θ	App. Sculp.	6.7	3	3 23,29	3,053	,9161	7,1122	,4847	-8,6856
5		Andromedæ	7.8	4	3 33,71	3,079	,8768	7,0887	,4884	+8,5443
6		Ceti	8	3	4 49,44	3,068	+8,8262	+7,1651	+0,4869	-7,8551
7		App. Sculp.	8	4	4 57,00	3,044	,9316	,2818	,4834	-8,7278
8		Andromedæ	8	3	6 0,77	3,098	,9403	,3727	,4911	+8,7496
9		Piscium	8.9	3	6 32,75	3,073	,8279	,2960	,4876	+7,9669
10		Andromedæ	7.8	3	6 36,65	3,091	,8891	,3615	,4901	+8,5965
11		Andromedæ	7.8	4	6 41,20	3,087	+8,8715	+7,3482	+0,4895	+8,5195
12		Piscium	7.8	3	6 54,17	3,063	8,8270	,3161	,4861	-7,9149
13		———	7.8	3	7 39,51	3,073	8,8271	,3629	,4876	+7,9262
14		App. Sculp.	7	3	7 50,73	3,039	8,8968	,4435	,4827	-8,6250
15		Cassiopeæ	7	3	8 11,76	3,155	9,1333	,6976	,4990	+9,0736
16		Piscium	7.8	3	8 15,33	3,068	+8,8237	+7,3914	+0,4869	+7,0508
17		Ceti	8.9	3	8 45,62	3,056	,8347	,4258	,4851	-8,1846
18		———	7	3	9 13,15	3,049	,8504	,4636	,4842	-8,3830
19		Piscium	7.8	3	9 25,13	3,066	,8240	,4464	,4866	-7,5051
20		Ceti	7.8	3	9 54,90	3,065	,8240	,4699	,4864	-7,5281
21		Andromedæ	7.8	2	10 5,17	3,103	+8,8887	+7,5431	+0,4918	+8,5959
22		Piscium	8	3	10 26,72	3,055	,8328	,5009	,4850	-8,1447
23		Phœnicis	6	3	10 31,34	3,008	,9673	,6382	,4783	-8,8100
24		Andromedæ	8	3	10 51,34	3,099	,8681	,5523	,4912	+8,5032
25		Ceti	7.8	6	11 49,96	3,051	,8363	,5581	,4844	-8,2185
26		Andromedæ	7.8	3	12 58,07	3,126	+8,9226	+7,6834	+0,4950	+8,7050
27		App. Sculp.	7.8	4	13 2,91	3,010	8,9190	,6821	,4786	-8,6953
28		Ceti	8	3	13 17,17	3,044	8,8428	,6124	,4834	-8,3112
29		App. Sculp.	8	3	13 34,70	3,033	8,8620	,6422	,4819	-8,4693
30		Cassiopeæ	8	4	13 56,90	3,218	9,1423	,9329	,5076	+9,0856
31		Cassiopeæ	9	3	14 21,76	3,223	+9,1434	+7,9462	+0,5083	+9,0871
32		Ceti	7	4	14 45,09	3,044	8,8420	,6566	,4834	-8,3038
33		App. Sculp.	7	3	14 59,55	3,013	8,8941	,7164	,4790	-8,6173
34		Andromedæ	7.8	4	16 4,11	3,124	8,8874	,7393	,4947	+8,5927
35		Ceti	8	4	16 30,44	3,046	8,8333	,6975	,4837	-8,1721
36		Ceti	8	4	16 35,97	3,039	+8,8419	+7,7079	+0,4827	-8,3058
37		———	7.8	3	17 32,13	3,051	,8283	,7177	,4844	-8,0336
38		Piscium	7	3	17 32,56	3,104	,8476	,7371	,4919	+8,3661
39		———	7.8	4	18 29,52	3,117	,8622	,7756	,4937	+8,4741
40		Ceti	7	3	18 43,59	3,057	,8247	,7427	,4853	-7,8356
41		Piscium	7.8	4	18 55,65	3,071	+8,8226	+7,7453	+0,4873	+7,3507
42		Ceti	7.8	3	19 41,07	3,042	,8328	,7718	,4832	-8,1698
43		Andromedæ	7	3	20 15,53	3,153	,9143	,8663	,4987	+8,6837
44		Ceti	8	4	20 51,69	3,041	,8325	,7972	,4830	-8,1672
45		———	7	3	21 6,72	3,059	,8233	,7934	,4856	-7,7032

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s.	″
1	4	+27 44 25,21	+20,042	+9,5798	+9,6682	+1,3019	−7,9822	2	+,015	− ,12
2	4	−12 41 52,32	20,042	+9,6284	−9,3415	,3019	7,9822	3	+,017	− ,01
3	3	− 4 13 59,77	20,041	+9,6375	−8,8664	,3019	8,1072	4	+,007	+ ,01
4	4	−36 3 4,44	20,041	+9,5563	−9,7695	,3019	8,1961	7	+,020	+ ,15
5	4	+27 41 53,98	20,041	+9,5753	+9,6675	,3019	8,2119	8	+,012	− ,13
6	4	− 6 9 13,33	20,038	+9,6345	−9,0286	+1,3019	−8,3387	10	+,004	− ,03
7	3	−38 44 3,78	20,038	+9,5478	−9,7961	,3019	,3502	11	+,010	+ ,11
8	2	+40 7 4,84	20,036	+9,4983	+9,8091	,3018	,4322	13	+,010	− ,14
9	3	+ 7 54 23,98	20,035	+9,6294	+9,1388	,3019	,4680	17	+,008	− ,06
10	3	+30 37 25,13	20,035	+9,5539	+9,7072	,3018	,4723	18	+,020	− ,08
11	3	+26 22 22,46	20,035	+9,5752	+9,6478	+1,3018	−8,4765	19	+,011	,00
12	3	− 7 2 51,22	20,034	+9,6385	−9,0877	,3018	,4890	21	+,016	+ ,01
13	3	+ 7 12 18,30	20,032	+9,6307	+9,0988	,3017	,5355	22	+,007	,00
14	3	−32 21 25,50	20,031	+9,5866	−9,7279	,3017	,5464	23	+,018	− ,03
15	3	+60 37 18,21	20,030	+9,2577	+9,9400	,3017	,5640	25	+,019	+ ,02
16	3	+ 0 56 18,68	20,030	+9,6365	+8,2268	+1,3017	−8,5674	26	+,014	+ ,01
17	4	−12 57 5,65	20,028	+9,6355	−9,3496	,3016	,5907	29	+,016	+ ,07
18	4	−19 57 49,75	20,026	+9,6253	−9,5323	,3016	,6128	31	+,001	− ,09
19	4	− 2 46 26,43	20,026	+9,6385	−8,6807	,3016	,6219	34	+,005	− ,05
20	3	− 2 55 31,96	20,024	+9,6385	−8,7037	,3015	,6454	36	+,011	+ ,02
21	3	+30 36 20,98	20,024	+9,5441	+9,7067	+1,3015	−8,6539	38	+,016	+ ,03
22	2	−11 51 33,80	20,022	+9,6385	−9,3114	,3015	,6677	39	+,017	+ ,04
23	2	−44 8 49,42	20,022	+9,5378	−9,8422	,3015	,6704	40	+,004	− ,02
24	3	+25 32 34,73	20,020	+9,5682	+9,6345	,3015	,6837	41	+,011	+ ,18
25	5	−13 58 21,54	20,015	+9,6375	−9,3815	,3014	,7212	44	+,007	− ,01
26	4	+37 16 39,25	20,010	+9,4914	+9,7817	+1,3012	−8,7601	47	+,014	− ,01
27	3	−36 42 27,21	20,010	+9,5632	−9,7755	,3012	,7623	48	−,001	,00
28	3	−17 7 3,92	20,009	+9,6355	−9,4677	,3012	,7688	49	+,014	− ,03
29	3	−23 54 45,33	20,007	+9,6243	−9,6065	,3012	,7794	51	+,028	− ,10
30	3	+61 19 55,73	20,005	+9,1875	+9,9424	,3011	,7898	52	+,032	+ ,10
31	1	+61 24 14,33	20,003	+9,1818	+9,9427	+1,3011	−8,8019	54	+,015	,00
32	4	−16 51 14,31	20,001	+9,6375	−9,4609	,3010	,8137	56	+,009	+ ,01
33	4	−31 56 45,67	19,998	+9,6053	−9,7222	,3010	,8213	57	,000	− ,04
34	4	+30 27 47,36	19,993	+9,5289	+9,6985	,3009	,8507	59	+,011	− ,08
35	4	−12 37 8,62	19,990	+9,6434	−9,3376	,3008	,8630	62	+,003	+ ,06
36	4	−16 56 15,66	19,990	+9,6395	−9,4627	+1,3008	−8,8647	63	+,022	− ,06
37	4	− 9 15 36,46	19,983	+9,6444	−9,2040	,3007	,8882	67	+,012	+ ,01
38	4	+19 14 13,97	19,983	+9,5843	+9,5172	,3007	,8882	66	+,014	− ,09
39	4	+24 8 4,01	19,976	+9,5599	+9,6104	,3005	,9119	71	+,006	− ,04
40	3	− 5 54 42,26	19,975	+9,6434	−9,0093	,3005	,9165	72	+,009	− ,11
41	4	+ 1 54 22,70	19,973	+9,6345	+8,5266	+1,3004	−8,9211	73	+,006	− ,04
42	3	−12 33 57,32	19,967	+9,6464	−9,3354	,3003	,9374	78	+,006	,00
43	4	+35 59 32,66	19,964	+9,4757	+9,7677	,3002	,9503	80	+,005	+ ,04
44	4	−12 30 22,15	19,958	+9,6474	−9,3329	,3001	,9628	82	+,016	+ ,06
45	4	− 4 22 39,17	19,956	+9,6434	−8,8781	,3001	,9682	83	+,006	− ,07

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.			Annual Preces-sion.	Logarithms of			
								a	*b*	*c*	*d*
				h.	*m.*	*s.*	*s.*				
46	App. Sculp.	7,8	2	0	21	20,45	+2,957	+8,9479	+7,9221	+0,4708	—8,7696
47	Piscium	7.8	3		21	26,76	3,085	,8261	,8017	,4893	+7,9652
48	Andromedæ	7	3		22	24,83	3,191	,9580	,9546	,5039	+8,7922
49	App. Sculp.	7	4		22	26,26	2,950	,9496	,9462	,4698	—8,7737
50	Ceti	8	3		22	41,20	3,042	,8297	,8302	,4832	—8,1090
51	Piscium	7	3		23	5,04	3,105	+8,8370	+7,8463	+0,4921	+8,2537
52	———	7.8	2		23	23,97	3,078	8,8226	7,8369	,4883	+7,6626
53	Ceti	7.8	2		23	49,50	3,020	8,8461	7,8698	,4800	—8,3609
54	Andromedæ	7	3		24	11,	3,142	8,8731	7,9020	,4972	+8,5361
55	Cassiopeæ	8	2		24	22,73	3,313	9,1181	8,1505	,5202	+9,0541
56	Ceti	7.8	2		24	50,04	3,056	+8,8228	+7,8634	+0,4851	—7,7393
57	Piscium	8	1		25	5,98	3,064	8,8214	7,8655	,4863	—7,2345
58	———	8	4		25	14,09	3,078	8,8223	7,8688	,4883	+7,6731
59	Cassiopeæ	8	2		26	4,55	3,343	9,1352	8,1964	,5241	+9,0771
60	———	7	3		26	24,01	3,276	9,0447	+8,1114	,5153	+8,9489
61	Andromedæ	8	3		26	46,98	3,139	+8,8609	+7,9341	+0,4968	+8,4739
62	Piscium	8	4		26	59,84	3,099	,8288	7,9053	,4912	+8,1081
63	Andromedæ	8	2		27	32,67	3,137	,8572	7,9421	,4965	+8,4517
64	Piscium	8	2		28	35,42	3,056	,8217	7,9232	,4851	—7,6949
65	Andromedæ	7	3		28	35,56	3,183	,9046	8,0061	,5028	+8,6579
66	Ceti	9	4		29	36,47	3,047	+8,8234	+7,9399	+0,4839	—7,9020
67	Piscium	7	3		30	29,72	3,090	,8233	7,9524	,4900	+7,9112
68	———	7.8	4		30	39,48	3,075	,8203	7,9513	,4878	+7,4110
69	———	7.8	3		31	8,57	3,102	,8274	7,9659	,4916	+8,0941
70	Ceti	7	2		31	27,55	3,029	,8294	7,9726	,4813	—8,1478
71	Piscium	7.8	3		32	22,04	3,138	+8,8469	+8,0029	+0,4966	+8,3841
72	———	8	3		33	0,75	3,109	,8291	7,9931	,4926	+8,1497
73	———	7.8	4		33	4,60	3,135	,8443	8,0092	,4962	+8,3628
74	Ceti	8	2		33	19,42	2,992	,8497	8,0180	,4760	—8,4076
75	Phœnicis	7.8	3		34	7,56	2,875	,9621	8,1409	,4586	—8,8039
76	Ceti	7	3		35	34,77	3,021	+8,8297	+8,0261	+0,4801	—8,1779
77	Piscium	7.8	3		36	44,55	3,066	8,8183	,0293	,4866	—6,8502
78	Ceti	7.8	2		36	44,67	3,018	8,8295	,0406	,4797	—8,1822
79	Cassiopeæ	7.8	3		36	54,97	3,369	9,0535	,2669	,5275	+8,9638
80	Andromedæ	7.8	3		37	3,80	3,170	8,8659	,0769	,5011	+8,4927
81	Phœnicis	7	2		37	11,24	2,862	+8,9579	+8,1745	+0,4567	—8,7961
82	Ceti	7	3		37	29,82	3,000	,8381	,0578	,4771	—8,3110
83	Andromed. *præ.*	8	4		37	37,22	3,195	,8807	,1020	,5046	+8,5806
84	——— *seq.*	7.8	2		37	40,23	3,195	,8808	,1028	,5045	+8,5808
85	———	8	4		39	0,11	3,176	,8617	,0991	,5019	+8,4944
86	Piscium	7.8	3		39	33,78	3,040	+8,8205	+8,0645	+0,4829	—7,8980
87	———	8	3		40	10,57	3,142	,8376	,0883	,4972	+8,3146
88	———	9	3		41	4,89	3,098	,8202	,0803	,4911	+7,9112
89	Ceti	6	3		41	11,42	3,006	,8307	,0923	,4780	—8,2273
90	———	8	4		41	27,06	3,031	,8217	,0862	,4816	—8,0028

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of				Piazzi No.	Annual P. M.	
				a'	*b'*	*c'*	*d'*		A. R.	Decn.
		° ′ ″	″						s.	″
46	3	—41 34 20,66	+19,955	+9,5877	—9,8198	+1,3001	—8,9723	84	+,009	+ ,04
47	4	+ 7 53 52,85	19,955	+9,6201	+9,1371	,3000	,9736	85	+,015	— ,09
48	2	+23 2 23,45	19,952	+9,3979	+9,8321	,2998	,9945	93	+,001	— ,01
49	3	—41 50 49,72	19,952	+9,5899	—9,8220	,2998	,9945	94	+,006	+ ,10
50	3	—10 59 27,68	19,943	+9,6484	—9,2771	,2998	,9983	96	+,015	— ,02
51	2	+15 6 54,09	19,940	+9,5933	+9,4145	+1,2997	—9,0070	97	+,006	— ,22
52	3	+ 3 56 25,89	19,936	+9,6294	+8,8376	,2996	,0119	98	,000	—, 02
53	3	—19 7 36,65	19,935	+9,6474	—9,5124	,2995	,0204	100	+,010	+ ,01
54	2	+27 22 27,75	19,930	+9,5263	+9,6605	,2995	,0264	103		+ ,02
55	1	+59 38 29,27	19,928	+9,1038	+9,9335	,2995	,0299	104	+,011	— ,16
56	3	— 4 45 16,82	19,924	+9,6444	—8,9139	+1,2994	—9,0380	106	+,016	— ,14
57	3	— 1 30 47,72	19,922	+9,6405	—8,4104	,2993	,0415	107	+,013	— ,02
58	2	+ 4 2 29,76	19,920	+9,6284	+8,8481	,2993	,0437	108	+,002	+ ,07
59	2	+60 57 36,55	19,912	+9,0414	+9,9389	,2991	,0563	112	+,004	+ ,06
60	3	+53 17 53,82	19,909	+9,2201	+9,9012	,2990	,0637	114	+,018	— ,02
61	3	+24 12 2,07	19,905	+9,5416	+9,6099	+1,2989	—9,0702	116	+,016	— ,14
62	2	+10 56 30,52	19,902	+9,6053	+9,2762	,2989	,0734	119	,000	— ,10
63	2	+23 7 17,18	19,897	+9,5465	+9,5914	,2988	,0818	121	+,019	,00
64	3	— 4 18 13,79	19,885	+9,6454	—8,8698	,2985	,0981	129	+,010	— ,04
65	3	+34 29 42,83	19,885	+9,4564	+9,7499	,2985	,0981	128	+,010	— ,03
66	3	— 6 54 4,71	19,874	+9,6503	—9,0749	+1,2983	—9,1128	132	+,011	— ,01
67	3	+ 7 0 50,19	19,864	+9,6180	+9,0840	,2981	,1252	135	+,007	— ,01
68	3	+ 2 13 4,23	19,862	+9,6325	+8,5868	,2980	,1271	137	+,059	+ ,22
69	3	+10 37 49,08	19,856	+9,6031	+9,2626	,2979	,1345	140	+,018	— ,08
70	3	—12 2 52,18	19,852	+9,6561	—9,3143	,2978	,1390	142	+,013	— ,16
71	3	+20 7 7,31	19,841	+9,5539	+9,5327	+1,2976	—9,1516	145	—,006	— ,13
72	3	+12 3 44,55	19,834	+9,5955	+9,3163	,2974	,1603	149	+,013	— ,09
73	3	+19 14 19,66	19,833	+9,5587	+9,5139	,2974	,1603	150	+,018	— ,07
74	3	—21 12 2,56	19,829	+9,6609	—9,5533	,2973	,1637	151	+,010	+ ,04
75	3	—44 1 29,35	19,819	+9,6191	—9,8369	,2971	,1739	153	+,007	— ,20
76	4	—12 54 4,00	19,800	+9,6609	—9,3429	+1,2967	—9,1911	161	—,007	— ,15
77	4	— 0 38 37,26	19,784	+9,6395	—8,0263	,2963	,2053	167	+,027	— ,16
78	2	—13 2 26,12	19,783	+9,6618	—9,3469	,2963	,2061	169	+,016	+ ,14
79	1	+54 24 25,45	19,781	+9,0828	+9,9046	,2962	,2077	168	+,023	— ,02
80	3	+25 16 28,19	19,779	+9,5092	+9,6250	,2962	,2092	170	+,018	— ,09
81	4	—43 34 12,61	19,778	+9,6304	—9,8324	+1,2962	—9,2107	173	—,001	— ,08
82	3	—17 19 20,44	19,773	+9,6656	—9,4670	,2961	,2138	174	+,017	— ,02
83	3	+30 2 48,14	19,771	+9,4683	+9,6939	,2960	,2153	175	+,015	— ,18
84	3	+30 3 13,96	19,770	+9,4669	+9,6941	,2960	,2161	176	+,020	— ,18
85	4	+25 23 37,00	19,751	+9,5038	+9,6263	,2956	,2310	184	+,022	— ,12
86	3	— 6 53 17,20	19,742	+9,6551	—9,0710	+1,2954	—9,2375	188	+,003	+ ,01
87	4	+17 25 8,32	19,733	+9,5587	+9 4702	,2952	,2439	191	—,004	+ ,08
88	3	+ 7 3 35,88	19,719	+9,6117	+9,0839	,2949	,2531	197	+,016	— ,01
89	3	—14 27 7,79	19,717	+9,6674	—9,3895	,2948	,2544	198	+,019	— ,09
90	4	— 8 44 39,36	19,713	+9,6590	—9,1733	,2947	,2572	200	+,009	— ,02

Digitized by Google

No.	Star's name	Mag.	No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a	b	c	d
				h. m. s.	*s.*				
91	Piscium	8	3	0 42 1,22	+3,139	+8,8339	+8,1040	+0,4968	+8,2773
92	Phœnicis	7.8	2	42 22,07	2,827	,9614	,2357	,4513	—8,8052
93	Piscium	8	3	42 25,47	3,099	,8198	,0940	,4512	+7,9168
94	———	7.8	4	42 34,95	3,094	,8187	,0950	,4905	+7,8403
95	———	7.8	3	43 0,31	3,121	,8256	,1061	,4943	+8,1405
96	Piscium	8	4	44 48,76	3,154	+8,8378	+8,1365	+0,4989	+8,3332
97	———	8.9	3	44 51,99	3,151	,8361	,1354	,4984	+8,3151
98	———	8.9	3	44 53,40	3,083	,8161	,1155	,4890	+7,5652
99	———	8.9	3	45 29,76	3,091	,8168	,1221	,4901	+7,7528
100	Ceti	8	3	45 30,06	2,998	,8299	,1351	,4768	—8,2372
101	Andromedæ	8	3	46 23,00	3,180	+8,8494	+8,1637	+0,5024	+8,4332
102	Cassiopeæ	7.8	4	47 53,12	3,417	9,0188	,3475	,5336	+8,9116
103	Piscium	8	4	47 55,89	3,201	8,8586	,1874	,5053	+8,4921
104	Cassiopeæ	7.8	3	48 27,89	3,419	9,0177	,3513	,5339	+8,9098
105	Andromedæ	7.8	2	48 45,72	3,175	8,8426	,1793	,5017	+8,3893
106	Piscium	8.9	3	48 49,56	3,070	+8,8139	+8,1506	+0,4871	+6,7548
107	Andromedæ	7	2	49 16,21	3,254	,8905	,2315	,5124	+8,6276
108	Piscium	8	3	49 18,79	3,125	,8220	,1636	,4948	+8,1097
109	———	8	4	49 35,60	3,176	,8421	,1860	,5019	+8,3871
110	———	8	4	49 53,60	3,126	,8219	,1688	,4950	+8,1127
111	Messoris	8.9	3	50 44,93	3,531	+9,0828	+8,4375	+0,5479	+9,0089
112	Piscium	8	3	50 59,65	3,068	8,8129	,1705	,4869	—5,9756
113	———	7	2	51 43,88	3,179	8,8407	,2035	,5021	+8,3827
114	———	8	3	52 39,98	3,124	8,8193	,1901	,4947	+8,0724
115	———	8	3	52 41,21	3,106	8,8156	,1870	,4922	+7,9117
116	Piscium	8	2	52 46,92	3,128	+8,8203	+8,1922	+0,4953	+8,1029
117	———	8	4	55 17,01	3,101	8,8133	,2063	,4915	+7,8253
118	———	8.9	3	55 18,53	3,103	8,8131	,2141	,4918	+7,8453
119	Cassiopeæ	7	3	56 39,72	3,710	9,1521	,5558	,5694	+9,1017
120	74 Piscium *seq.*	6.7	2	56 54,90	3,192	8,8390	,2448	,5041	+8,3853
121	Piscium *seq.*	8	3	57 22,75	3,091	+8,8111	+8,2207	+0,4901	+7,6601
122	———	8	3	57 27,74	3,200	,8419	,2519	,5051	+8,4095
123	Ceti	8.9	1	58 13,80	3,005	,8171	,2329	,4778	—8,0825
124	Piscium	7.8	3	58 21,96	3,186	,8346	,2520	,5032	+8,3535
125	Ceti	8	3	59 48,01	3,123	,8143	,2423	,4946	+8,0110
126	Phœnicis	7.8	2	1 0 17,67	2,751	+8,9398	+8,3714	+0,4395	—8,7681
127	Piscium	8	4	0 32,65	3,210	8,8415	,2750	,5065	+8,4160
128	———	7.8	3	0 35,25	3,207	8,8404	,2745	,5061	+8,4086
129	Cassiopeæ	8	3	2 4,28	3,809	9,1681	,6136	,5808	+9,1223
130	Piscium	7.8	3	2 19,24	3,123	8,8126	,2595	,4946	+7,9923
131	Piscium	8	3	2 50,60	3,215	+8,8397	+8,2905	+0,5072	+8,4107
132	———	7	3	3 58,63	3,274	,8657	,3247	,5151	+8,5543
133	App. Sculp.	8	3	5 9,51	2,795	,8983	,3653	,4464	—8,6681
134	Piscium	7.8	3	5 11,68	3,112	,8090	,2764	,4930	+7,8770
135	———	8	3	5 38,53	3,193	,8283	,2989	,5042	+8,3252

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of				Piazzi No.	Annual P. M.	
				a′	*b′*	*c′*	*d′*		A. R.	Decn.
		° ′ ″	″						s.	″
91	4	+16 5 53,93	+19,704	+9,5635	+9,4360	+1,2946	−9,2627	202	+,008	− ,04
92	2	−44 17 24,07	19,697	+9,6434	−9,8363	,2944	,2667	205	+,006	,00
93	4	+ 7 9 13,47	19,697	+9,6107	+9,0895	,2944	,2667	204	+,010	− ,01
94	4	+ 6 0 19,43	19,695	+9,6159	+9,0140	,2943	,2687	206	−,001	− ,02
95	3	+11 53 33,44	19,688	+9,5866	+9,3071	,2942	,2727	208	+,016	+ ,03
96	4	+18 12 9,66	19,658	+9,5453	+9,4869	+1,2935	−9,2902	214	+,005	+ ,03
97	4	+17 30 8,69	19,657	+9,5502	+9,4705	,2935	,2909	215	+,003	− ,01
98	3	+ 3 11 43,38	19,657	+9,6253	+8,7406	,2935	,2909	216	+,015	− ,11
99	4	+ 4 54 55,71	19,647	+9,6180	+8,9273	,2933	,2965	218	+,007	− ,19
100	3	−14 48 48,49	19,647	+9,6730	−9,3986	,2933	,2965	219	+,014	− ,12
101	2	+22 31 25,79	19,631	+9,5105	+9,5747	+1,2929	−9,3052	224	+,028	+ ,06
102	1	+51 21 4,28	19,603	+9,0334	+9,8831	,2923	,3191	233	+,012	+ ,03
103	3	+25 26 59,64	19,603	+9,4800	+9,6238	,2923	,3191	236	+,013	− ,06
104	3	+51 14 56,75	19,593	+9,0334	+9,8823	,2921	,3238	237	+,021	+ ,04
105	3	+20 35 55,94	19,587	+9,5198	+9,5367	,2920	,3267	239	+,026	− ,10
106	2	+ 0 28 28,19	19,587	+9,6355	+7,9308	+1,2920	−9,3267	240	+,001	− ,21
107	2	+33 3 53,69	19,578	+9,3927	+9,7269	,2918	,3307	242	+,008	− ,17
108	2	+11 9 12,34	19,577	+9,5843	+9,2775	,2917	,3313	244	+,004	− ,02
109	4	+20 30 59,30	19,572	+9,5185	+9,5347	,2916	,3336	245	+,008	− ,04
110	2	+11 14 28,09	19,566	+9,5843	+9,2804	,2915	,3365	247	−,003	− ,03
111	2	+57 28 40,80	19,549	+8,6721	+9,9152	+1,2911	−9,3438	248	+,022	+ ,03
112	3	− 0 6 15,81	19,542	+9,6375	−7,1517	,2910	,3466	251	+,005	− ,32
113	2	+20 21 46,77	19,531	+9,5172	+9,5307	,2907	,3515	253	+,010	− ,06
114	3	+10 17 44,36	19,512	+9,5866	+9,2414	,2903	,3591	255	+,012	− ,15
115	3	+ 7 9 0,42	19,511	+9,6042	+9,0844	,2903	,3597	256	+,004	− ,07
116	3	+11 1 38,48	19,510	+9,5821	+9,2708	+1,2902	−9,3602	257	+,011	+ ,02
117	4	+ 5 52 59,12	19,458	+9,6096	+8,9991	,2891	,3801	269	+,007	− ,03
118	4	+ 6 10 11,51	19,436	+9,6074	+9,0189	,2886	,3877	271	+,021	− ,04
119	2	+62 53 32,75	19,430	−8,3222	+9,9360	,2885	,3902	272	+,014	− ,05
120	2	+20 35 8,29	19,424	+9,5038	+9,5327	,2883	,3922	276	+,005	− ,06
121	3	+ 4 2 3,91	19,414	+9,6180	+8,8351	+1,2881	−9,3957	281	−,003	− ,12
122	4	+21 40 17,07	19,412	+9,4928	+9,5537	,2881	,3961	282	+,019	+ ,07
123		−10 38	19,396	+9,6749	−9,2511	,2877	,4015	288		
124	4	+19 16 17,29	19,392	+9,5145	+9,5045	,2876	,4030	289	+,005	− ,08
125	3	+ 9 1 48,53	19,360	+9,5888	+9,1817	,2869	,4130	297	+,011	− ,08
126	4	−42 21 57,64	19,350	+9,6964	−9,8130	+1,2867	−9,4163	303	−,005	− ,15
127	3	+22 1 52,60	19,344	+9,4829	+9,5591	,2865	,4181	302	+,005	+ ,11
128	2	+21 42 8,32	19,342	+9,4857	+9,5527	,2865	,4186	304	+,024	− ,04
129	3	+64 8 6,49	19,306	−8,7243	+9,9379	,2857	,4292	312	+,011	− ,05
130	3	+ 8 40 42,65	19,302	+9,5888	+9,1634	,2856	,4305	4	+,010	+ ,24
131	4	+21 50 59,81	19,289	+9,4800	+9,5544	+1,2853	−9,4341	7	+,006	+ ,03
132	3	+29 11 32,53	19,262	+9,3874	+9,6712	,2847	,4417	11	+,014	− ,12
133	3	−36 4 38,72	19,234	+9,7126	−9,7518	,2841	,4490	18	+,019	− ,06
134	2	+ 6 42 35,10	19,232	+9,5999	+9,0501	,2840	,4495	17	+,019	+ ,04
135	3	+18 15 21,86	19,222	+9,5092	+9,4787	,2838	,4525	21	+,017	+ ,03

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Precession.	Logarithms of a	b	c	d
				h. m. s.	s.				
136	Ceti	8	3	0 6 7,20	+3,009	+8,8106	+8,2845	+0,4784	—7,9936
137	Piscium	7.8	3	7 1,88	3,109	8,8074	,2877	,4926	+7,8338
138	Cassiopeæ	7	2	7 16,32	3,660	9,0661	,5483	,5635	+8,9887
139	Piscium	8	2	8 50,72	3,094	8,8049	,2970	,4905	+7,6300
140	Cassiopeæ	7.8	3	9 36,27	3,694	9,0714	,5692	,5675	+8,9967
141	Cassiopeæ	8	5	10 12,78	3,890	+9,1587	+8,6600	+0,5899	+9,1117
142	Piscium	7.8	5	10 23,42	3,095	8,8039	,3066	,4907	+7,6253
143	———	8	3	10 25,28	3,115	,8058	,3085	,4935	+7,8652
144	———	8	4	11 0,63	3,116	,8055	,3121	,4936	+7,8693
145	———	7.8	3	11 13,83	3,106	,8043	,3126	,4922	+7,7712
146	Andromedæ	8	3	12 14,31	3,505	+8,9635	+8,4784	+0,5447	+8,8236
147	Piscium	7.8	4	13 53,26	3,101	,8021	,3274	,4915	+7,6886
148	Andromedæ	7.8	4	14 45,84	3,459	,9313	,4621	,5389	+8,7595
149	Phœnicis	8	4	15 10,24	2,645	,9464	,4793	,4224	—8,7917
150	Piscium	7.8	3	15 19,55	3,102	,8012	,3353	,4916	+7,6926
151	Andromedæ	7	2	16 50,20	3,362	+8,8791	+8,4222	+0,5266	+8,6238
152	Phœnicis	6.7	3	17 34,06	2,618	,9516	,4992	,4180	—8,8037
153	Persei	8	2	17 36,73	3,617	,9992	,5475	,5583	+8,8895
154	Piscium	8	3	19 52,19	3,125	,8002	,3617	,4948	+7,8943
155	———	7	4	20 22,16	3,277	,8373	,4019	,5155	+8,4542
156	Cassiopeæ	7.8	4	20 31,48	4,282	+9,2457	+8,8111	+0,6324	+9,2164
157	Piscium	8	4	21 13,42	3,351	8,8645	,4338	,5252	+8,5810
158	Andromedæ	7.8	4	24 49,98	3,425	8,8877	,4778	,5347	+8,6612
159	100[2] Piscium	7.8	3	26 10,91	3,170	8,8015	,3991	,5011	+8,1097
160	———	7.8	4	26 17,15	3,132	8,7959	,3939	,4958	+7,9087
161	Andromedæ	8	4	26 48,08	3,609	+8,9621	+8,5634	+0,5574	+8,8297
162	———	7	4	27 42,41	3,616	,9623	,5683	,5582	+8,8306
163	Piscium	7.8	2	28 57,94	3,169	,7986	,4112	,5009	+8,0895
164	App. Sculp.	6.9	3	29 27,64	2,822	,8356	,4506	,4506	—8,4748
165	103 Piscium	7.8	4	30 25,77	3,214	,8058	,4262	,5070	+8,2413
166	Cassiopeæ	7	7	31 35,96	3,961	+9,0856	+8,7127	+0,5978	+9,0219
167	Piscium	7.8	4	32 10,48	3,312	8,8301	,4601	,5201	+8,4550
168	Phœnicis	8	3	32 27,38	2,653	8,8925	,5239	,4237	—8,6846
169	Piscium	8	3	32 47,76	3,145	8,7917	,4248	,4976	+7,9494
170	Cassiopeæ	8.9	2	32 53,30	3,969	9,0831	,7168	,5987	+9,0189
171	Ceti	7.8	2	33 22,88	2,848	+8,8251	+8,4573	+0,4545	—8,4046
172	Andromedæ	8	3	33 34,44	3,697	8,9766	8,6139	,5678	+8,8596
173	Arietis	8.9	3	35 56,52	3,256	8,8090	8,4582	,5127	+8,3227
174	Camelop.	7.8	3	36 18,16	6,577	9,5971	9,2484	,8180	+9,5919
175	Piscium	7.8	4	38 27,66	3,167	8,7890	8,4511	,5006	+8,0301
176	Trianguli	7	4	39 19,07	3,417	+8,8525	+8,5189	+0,5336	+8,5751
177	Arietis	8	4	39 28,67	3,232	8,7991	,4661	,5095	+8,2451
178	Persei	8	3	39 49,54	3,858	9,0163	,6853	,5864	+8,9265
179	Fornacis	8	4	41 1,16	2,776	8,8304	,5053	,4434	—8,4882
180	χ Ceti *præ.*	7	4	41 20,16	2,952	8,7886	,4648	,4701	—8,0883

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of				Piazzi No.	Annual P. M.	
				a′	*b′*	*c′*	*d′*		A. R.	Decn.
		° ′ ″	″						s.	″
136	3	− 8 47 35,27	+19,210	+9,6739	—9,1646	+1,2835	—9,4555	22	+,021	+ ,33
137	3	+ 6 5 13,03	19,187	+9,6021	+9,0074	,2830	,4614	28	+,015	— ,05
138	3	+56 45 52,91	19,180	—7,6990	+9,9034	,2828	,4630	27	—,010	+ ,07
139	4	+ 3 47 53,16	19,142	+9,6159	+8,8051	,2820	,4721	34	+,016	— ,05
140	2	+57 20 37,10	19,119	—8,2787	+9,9048	,2815	,4773	35	+,006	+ ,02
141	3	+63 48 33,40	19,103	—8,9031	+9,9322	+1,2811	—9,4805	39	+,077	— ,01
142	4	+ 3 47 19,45	19,100	+9,6159	+8,8004	,2810	,4817	42	+,011	— ,07
143	4	+ 6 33 56,93	19,100	+9,5977	+9,0384	,2810	,4817	43	+,019	+ ,02
144	4	+ 6 37 37,19	19,084	+9,5977	+9,0424	,2807	,4853	45	+,022	,00
145	4	+ 5 17 48,94	19,076	+9,6064	+8,9454	,2805	,4869	46	+,013	— ,07
146	4	+46 25 15,83	19,050	+8,8633	+9,8380	+1,2799	—9,4927	49	+,020	+ ,11
147	4	+ 4 23 30,12	19,004	+9,6117	+8,8634	,2788	,5022	54	+,007	— ,11
148	4	+42 17 2,66	18,980	+9,0212	+9,8045	,2783	,5071	61	+,006	+ ,03
149	4	—44 27 49,99	18,970	+9,7292	—9,8214	,2781	,5089	65	+,024	+ ,02
150	4	+ 4 27 4,63	18,964	+9,6107	+8,8674	,2779	,5101	64	+,013	— ,07
151	4	+33 43 39,18	18,923	+9,2504	+9,7197	+1,2770	—9,5181	70	+,038	— ,12
152	3	—45 23 6,12	18,901	+9,7340	—9,8266	,2765	,5221	78	,000	— ,04
153	4	+50 57 17,48	18,897	+8,1461	+9,8647	,2764	,5228	71	+,005	,00
154	3	+ 7 6 25,19	18,833	+9,5899	+9,0670	,2749	,5344	87	+,009	+ ,02
155	5	+24 25 25,33	18,816	+9,4031	+9,5895	,2745	,5372	90	+,013	— ,02
156	4	+69 10 15,07	18,812	—9,2253	+9,9432	+1,2744	—9,5378	86	+,025	— ,02
157	3	+31 20 20,36	18,793	+9,2787	+9,6884	,2740	,5413	93	+,012	+ ,09
158	4	+36 23 38,96	18,678	+9,1271	+9,7429	,2713	,5595	104	+,007	+ ,07
159	8	+11 43 1,83	18,638	+9,5428	+9,2766	,2703	,5660	112	+,012	— ,04
160	4	+ 7 25 57,36	18,633	+9,5821	+9,0811	,2703	,5663	114	+,005	— ,04
161	4	+47 28 29,98	18,615	+8,3010	+9,8355	+1,2698	—9,5692	115	+,013	— ,03
162	4	+47 34 22,85	18,587	+8,2304	+9,8355	,2692	,5733	121	+,029	+ ,05
163	4	+11 14 25,10	18,547	+9,5465	+9,2572	,2683	,5788	128	+,027	+ ,02
164	4	—25 51 16,96	18,531	+9,7459	—9,6052	,2679	,5810	134	+,028	— ,02
165	4	+15 47 27,61	18,497	+9,4955	+9,4006	,2671	,5856	135	+,006	— ,06
166	2	+59 42 53,84	18,455	—9,0719	+9,9005	+1,2661	—9,5913	139	+,031	— ,09
167	3	+24 54 49,94	18,434	+9,3598	+9,5886	,2657	,5937	145	+,011	— ,09
168	3	—38 18 20,43	18,427	+9,7672	—9,7556	,2655	,5948	147	+,008	+ ,17
169	4	+ 8 14 25,08	18,417	+9,5705	+9,1209	,2652	,5963	149	+,006	+ ,01
170	3	+59 36 20,65	18,411	—9,0864	+9,8989	,2651	,5969	146	+,032	— ,05
171	2	—22 33 3,45	18,395	+9,7427	—9,5462	+1,2647	—9,5989	153	+,019	— ,08
172	2	+49 46 56,58	18,388	—8,3802	+9,8455	,2645	,5998	152	+,027	— ,20
173	5	+19 1 49,21	18,305	+9,4425	+9,4744	,2626	,6099	161	+,006	— ,01
174	3	+81 8 31,49	18,291	—9,5276	+9,9551	,2622	,6116	155	+,137	+ ,06
175	4	+10 1 14,93	18,214	+9,5490	+9,1995	,2604	,6205	169	+,009	+ ,15
176	3	+31 51 24,39	18,183	+9,1673	+9,6803	+1,2597	—9,6240	171	—,010	+ ,36
177	4	+16 12 1,83	18,178	+9,4757	+9,4036	,2595	,6246	174	+,001	+ ,08
178	4	+54 23 53,76	18,163	—8,9590	+9,8674	,2592	,6262	173	+,020	— ,06
179	4	—27 4 22,80	18,118	+9,7634	—9,6139	,2581	,6311	180		+ ,02
180	4	—11 31 2,54	18,108	+9,7076	—9,2556	,2579	,6321	182	+,005	— ,06

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	*s.*				
181	Piscium	9	2	1 43 8,76	+3,102	+8,7789	+8,4641	+0,4916	+7,5434
182	Ceti	8	4	43 20,57	3,171	8,7846	8,4709	,5012	+8,0250
183	Mesarthim	8	2	44 32,60	3,265	8,8000	8,4917	,5139	+8,3018
184	Cassiopeæ	7.8	4	45 32,67	5,315	9,3676	9,0644	,7255	+9,3529
185	Andromedæ	7.8	4	47 45,29	3,703	8,9345	8,6417	,5685	+8,7938
186	Ceti	8	5	51 36,77	3,135	+8,7726	+8,4973	+0,4962	+7,8025
187	Piscium	8	4	51 50,53	3,108	8,7706	,4966	,4925	+7,5705
188	Cassiopeæ	8	2	52 54,97	4,345	9,1209	,8520	,6380	+9,0731
189	Ceti	7.8	3	53 13,16	3,147	8,7718	,5038	,4979	+7,8638
190	Andromedæ	7.8	2	53 52,61	3,634	8,8937	,6288	,5604	+8,7156
191	Arietis	7.8	4	55 4,63	3,370	+8,8098	+8,5502	+0,5276	+8,4381
192	Ceti	8	2	55 11,12	3,010	,7682	,5091	,4786	—7,7171
193	——	8	5	58 56,85	3,162	,7667	,5244	,5000	+7,9147
194	Persei	8.9	4	59 5,80	3,969	,9885	,7470	,5987	+8,8940
195	Ceti	8	8	59 38,64	3,163	,7660	,5266	,5001	+7,9140
196	62 Ceti	8	4	2 0 51,73	3,032	+8,7609	+8,5270	+0,4817	—7,4939
197	Arietis	8	2	2 11,79	3,324	,7875	,5594	,5217	+8,3342
198	——	8	4	3 48,61	3,306	,7814	,5605	,5193	+8,2955
199	66 Ceti *præ.*	*var.*	4	4 24,63	3,030	,7569	,5383	,4814	—7,4969
200	——	8	3	4 30,79	3,111	,7570	,5388	,4929	+7,5467
201	Persei	7.8	3	5 22,59	4,111	+9,0108	+8,7964	+0,6139	+8,9308
202	Ceti	7	3	5 25,43	3,022	8,7561	,5417	,4803	—7,5756
203	Persei	7.8	5	5 27,52	4,113	9,0106	,7968	,6142	+8,9306
204	Andromedæ	8	2	5 54,30	3,847	8,9301	,7180	,5851	+8,8021
205	Persei	8.9	4	6 2,12	4,156	9,0214	,8098	,6187	+8,9463
206	Ceti	7.8	3	6 10,72	3,079	+8,7543	+8,5433	+0,4884	+6,9662
207	Persei	7	1	7 37,01	4,133	9,0093	,8045	,6163	+8,9298
208	Trianguli	8	4	7 55,24	3,445	8,8062	,6026	,5372	+8,4778
209	——	8	3	7 55,59	3,445	8,8062	,6026	,5372	+8,4778
210	Ceti	7.8	3	8 0,26	3,086	8,7522	,5489	,4894	+7,1702
211	Ceti	8	2	8 33,10	3,023	+8,7523	+8,5512	+0,4804	—7,5562
212	——	9	3	8 44,04	3,125	,7526	,5523	,4948	+7,6584
213	Eridani	7.8	4	8 46,63	2,431	,8788	,6788	,3858	—8,7028
214	Ceti	7.8	2	8 47,98	2,977	,7547	,5547	,4738	—7,8597
215	——	11	1	11 11,67	3,021	,7491	,5592	,4801	—7,5589
216	Andromedæ	7.8	4	12 42,25	3,699	+8,8669	+8,6833	+0,5681	+8,6817
217	Ceti	8	4	12 51,69	3,158	,7494	,5664	,4994	+7,8364
218	——	9.10	3	13 20,79	3,020	,7464	,5656	,4800	—7,5562
219	——	8.9	3	13 21,08	3,054	,7457	,5645	,4849	—7,0223
220	——	7.8	4	13 23,69	3,071	,7455	,5646	,4873	+6,3554
221	Tri. Min.	7.8	4	15 56,06	3,485	+8,8012	+8,6307	+0,5422	+8,4890
222	Ceti	8.9	4	16 43,66	3,067	,7413	,5741	,4867	—5,9040
223	Persei	8	4	16 51,71	4.026	,9501	,7837	,6049	+8,8456
224	Arietis	7.8	3	16 55,02	3,198	,7474	,5810	,5049	+7,9776
225	——	7	3	17 23,15	3,201	,7470	,5825	,5053	+7,9838

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s.	″
181	4	+ 3 18 51,23	+18,040	+9,6107	+8,7187	+1,2562	—9,6395	189	+,005	,00
182	4	+ 9 59 44,00	18,033	+9,5463	+9,1944	,2560	,6403	191	+,011	— ,22
183	2	+18 29 32,36	17,987	+9,4330	+9,4548	,2549	,6447	196	+,007	+ ,15
184	4	+75 8 52,66	17,945	—9,5051	+9,9373	,2539	,6488	195	+,037	— ,07
185	4	+46 17 30,49	17,859	—8,4472	+9,8091	,2518	,6570	207	+,005	+ ,09
186	4	+ 6 7 15,70	17,706	+9,5821	+8,9761	+1,2481	—9,6709	227	+,008	+ ,05
187	4	+ 3 35 27,02	17,695	+9,6053	+8,7458	,2478	,6718	228	,000	+ ,03
188	4	+63 35 33,51	17,647	—9,3655	+9,8969	,2467	,6759	230	+,009	+ ,06
189	4	+ 7 4 18,39	17,639	+9,5705	+9,0365	,2465	,6766	234	+,021	— ,08
190	2	+41 32 26,69	17,612	+7,9031	+9,7657	,2458	,6789	237	+,017	— ,08
191	3	+25 7 40,17	17,562	+9,2742	+9,5710	+1,2446	—9,6830	245	+,014	— ,17
192	4	— 5 7 25,14	17,556	+9,6767	—8,8914	,2445	,6835	246	+,018	— ,07
193	4	+ 8 3 40,93	17,396	+9,5563	+9,0865	,2404	,6961	258	+,014	,00
194	4	+53 32 56,16	17,387	—9,1523	+9,8438	,2402	,6968	255	+,035	— ,14
195	5	+ 8 4 6,01	17,367	+9,5563	+9,0858	,2397	,6983	261	+,011	— ,10
196	4	— 3 6 35,54	17,311	+9,6628	—8,6694	+1,2383	—9,7024	265	+,001	— ,02
197	4	+20 36 2,97	17,252	+9,3560	+9,4815	,2368	,7067	1	+,031	+ ,02
198	4	+19 2 52,21	17,177	+9,3838	+9,4471	,2350	,7120	12	+,007	— ,08
199	4	— 3 9 55,97	17,154	+9,6637	—8,6723	,2343	,7137	17	+,028	— ,08
200	4	+ 3 30 49,38	17,147	+9,6031	+8,7220	,2342	,7141	19	+,009	— ,02
201	2	+56 15 42,10	17,108	—9,2833	+9,8512	+1,2332	—9,7168	21	+,013	+ ,03
202	3	— 3 48 4,41	17,108	+9,6693	—8,7507	,2332	,7168	26	+,013	+ ,05
303	4	+56 17 17,27	17,102	—9,2856	+9,8511	,2330	,7173	22	+,014	+ ,11
204	4	+48 6 40,02	17,084	—8,9956	+9,8026	,2326	,7185	25	+,017	— ,01
205	2	+57 15 19,79	17,078	—9,3117	+9,8553	,2324	,7189	24	+,002	+ ,03
206	4	+ 0 54 31,15	17,074	+9,6284	+8,1422	+1,2323	—9,7193	31	+,014	— ,05
207	3	+56 22 23,96	17,005	—9,3032	+9,8491	,2305	,7238	35	+,002	+ ,10
208	3	+27 59 2,02	16,992	+9,1271	+9,5999	,2302	,7246	38	+,028	+ ,29
209	4	+27 59 2,42	16,994	+9,1271	+9,5999	,2302	,7246	39	+,019	— ,09
210	3	+ 1 28 26,94	16,988	+9,6232	+8,3461	,2301	,7248	40	+,009	+ ,07
211	2	— 3 40 6,08	16,964	+9,6693	—8,7314	+1,2295	—9,7264	44	+,009	+ ,03
212	4	+ 4 35 41,79	16,954	+9,5911	+8,8330	,2293	,7270	45	+,019	— ,12
213	3	—41 50 7,81	16,954	+9,8319	—9,7512	,2292	,7272	50	—,009	+ ,03
214	2	— 7 20 31,50	16,951	+9,6972	—9,0322	,2292	,7272	48	—,004	+ ,03
215	6	— 3 43 28,35	16,842	+9,6702	—8,7341	,2263	,7343	57		— ,17
216	4	+40 43 38,09	16,765	—8,4624	+9,7372	+1,2244	—9,7388	62	+,040	— ,01
217	4	+ 6 59 54,75	16,758	+9,5611	+9,0092	,2242	,7392	63	+,002	+ ,07
218	4	— 3 42 47,68	16,732	+9,6712	—8,7314	,2236	,7407	67	+,001	+ ,07
219	4	— 1 6 14,24	16,734	+9,6474	—8,1983	,2237	,7405	66	+,008	— ,14
220	4	+ 0 12 55,87	16,732	+9,6355	+7,5315	,2236	,7407	68	+,007	— ,13
221	4	+29 8 8,31	16,610	+9,0253	+9,6062	+1,2204	—9,7479	74	+,014	— ,05
222	4	— 0 6 32,94	16,571	+9,6385	—7,0801	,2193	,7502	81	+,016	— ,21
223	4	+51 48 26,73	16,561	—9,2430	+9,8127	,2191	,7507	78	+,010	+ ,08
224	4	+ 9 45 35,00	16,561	+9,5211	+9,1474	,2191	,7507	82	+,016	— ,17
225	4	+ 9 54 15,81	16,537	+9,5185	+9,1533	,2185	,7520	83	+,008	— ,34

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a	b	c	d
				h. m. s.	s.				
226	Trianguli	8	5	2 18 35,21	+3,492	+8,7977	+8,6380	+0,5431	+8,4853
227	———	10	3	19 8,74	3,490	,7962	,6387	,5428	+8,4813
228	Persei	8	4	22 12,35	3,592	,8152	,6704	,5553	+8,5624
229	Ceti	9	5	24 20,50	3,154	,7337	,5971	,4989	+7,7706
230	Trianguli	8	3	25 55,43	3,605	,8104	,6801	,5569	+8,5582
231	Persei	8	4	27 6,64	4,016	+8,9171	+8,7918	+0,6038	+8,8000
232	Ceti	8.9	3	27 18,64	3,010	,7282	,6032	,4786	—7,5894
233	Arietis	8	4	28 53,16	3,234	,7335	,6151	,5097	+8,0357
234	Persei	7.8	4	29 18,26	3,997	,9059	,7891	,6017	+8,7828
235	Ceti	9	4	31 22,25	2,887	,7313	,6226	,4604	—8,0644
236	Ceti	7.8	3	32 30,10	3,146	+8,7213	+8,6169	+0,4978	+7,6936
237	Trianguli	8	3	34 53,84	3,528	,7730	,6780	,5475	+8,4556
238	Ceti	9	4	35 20,11	3,099	,7154	,6220	,4912	+7,2863
239	———	8.9	5	35 55,89	3,141	,7158	,6247	,4971	+7,6547
240	Persei	8.9	4	36 41,90	4,108	,9129	,8251	,6136	+8,8027
241	Ceti	7	3	36 45,46	3,128	+8,7140	+8,6260	+0,4953	+7,5612
242	Persei	9	2	37 42,10	4,029	,8903	,8061	,6052	+8,7649
243	Ceti	7.8	2	37 36,96	3,141	,7132	,6286	,4971	+7,7462
244	Arietis	7.8	4	37 58,72	3,243	,7200	,6368	,5109	+8,0233
245	Persei	8	4	39 4,84	4,149	,9162	,8374	,6179	+8,8104
246	Fornacis	8.9	5	40 24,31	2,395	+8,8108	+8,7369	+0,3793	—8,6003
247	Persei	8.9	4	40 32,07	4,164	,9131	,8399	,6185	+8,8068
248	Fornacis	9	4	42 26,54	2,503	,7805	,7143	,3985	—8,5168
249	———	8.9	5	42 29,59	2,536	,7729	,7070	,4041	—8,4906
250	Eridani	9	4	45 26,56	2,920	,7049	,6505	,4654	—7,9225
251	Cassiopeæ	7	4	46 52,90	4,651	+9,0059	+8,9570	+0,6675	+8,9462
252	Persei	8.9	1	49 14,60	4,210	8,9003	,8605	,6243	+8,7951
253	———	7.8	5	49 49,97	3,760	8,7919	,7543	,5752	+8,5764
254	24S ———	7.8	3	51 1,56	3,715	8,7785	,7454	,5700	+8,5423
255	θ Eridani *seq*	6	5	52 3,30	2,277	8,8096	,7800	,3574	—8,6261
256	Eridani	7.8	4	52 52,35	2,470	+8,7633	+8,7370	+0,3927	—8,5011
257	Arietis	8	5	3 0 2,02	3,273	,6829	,6839	,5150	+8,0090
258	———	8.9	5	0 28,51	3,351	,6907	,6932	,5252	+8,1479
259	Persei	7.8	3	2 0,76	4,110	,8392	,8481	,6138	+8,7069
260	———	7.8	4	2 2,73	4,112	,8398	,8486	,6140	+8,7079
261	Camelop.	7.8	4	3 15,12	5,132	+9,0413	+9,0550	+0,7103	+8,9991
262	Eridani	6.7	5	4 55,68	2,517	8,7249	8,7444	,4009	—8,4208
263	Tauri	8.9	5	5 22,36	3,625	8,7248	8,7460	,5593	+8,4231
264	———	8.9	4	7 57,73	3,366	8,6768	8,7078	,5271	+8,1422
265	———	7.8	3	10 27,84	3,398	8,6752	8,7157	,5312	+8,1767
266	Arietis	8	4	13 52,37	3,440	+8,6730	+8,7267	+0,5366	+8,2153
267	Persei	8	5	15 58,19	4,232	,8237	,8856	,6265	+8,7019
268	———	8.9	I	16 25,61	4,211	,8180	,8816	,6244	+8,6924
269	Camelop.	8.9	5	17 44,81	4,510	,8759	,9444	,6542	+8,7883
270	Persei	8.9	1	18 19,07	4,176	,8047	,8755	,6208	+8,6718

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s	″
226	4	+29 7 59,73	+16,477	+9,0086	+9,6026	+1,2169	—9,7553	89	+,017	—0,02
227	2	+28 56 54,30	16,452	9,0128	9,5994	,2162	,7568	92		— ,04
228	4	+33 56 53,69	16,295	8,5401	9,6572	,2120	,7652	103	+,008	,00
229	3	+ 6 13 47,29	16,188	9,5647	8,9441	,2092	,7706	111	+,030	+ ,11
230	4	+34 0 13,33	16,140	8,4314	9,6527	,2070	,7747	117	+,035	— ,08
231	4	+49 46 22,00	16,039	—9,2504	+9,7861	+1,2052	—9,7779	119	+,007	— ,17
232	4	— 4 10 43,13	16,032	+9,6785	—8,7644	,2051	,7781	127	,016	+ ,04
233	4	+11 33 12,77	15,948	+9,4829	+9,2028	,2027	,7823	134	,024	+ ,04
234	2	+48 50 51,86	15,926	—9,2355	+9,7770	,2021	,7833	133	,024	+ ,02
235	4	—12 27 34,61	15,819	+9,7451	—9,2302	,1991	,7884	145	,013	,00
236	4	+ 5 21 49,08	15,754	+9,5729	+8,8677	+1,1974	—9,7911	151	+,002	— ,06
237	5	+28 45 47,06	15,625	+8,8921	9,5744	,1938	,7968	160	,007	— ,04
238	2	+ 2 7 2,94	15,602	+9,6138	8,4621	,1932	,7978	163	,006	— ,05
239	4	+ 4 57 30,15	15,569	+9,5775	8,8291	,1923	,7992	165	,016	— ,17
240	4	+50 51 30,43	15,525	—9,3365	9,7787	,1909	,8013	169	,004	+ ,04
241	2	+ 4 1 0,01	15,525	+9,5899	+8,7362	+1,1910	—9,8010	171	+,016	— ,04
242	2	+48 29 35,28	15,470	—9,2765	9,7621	,1895	,8034	172	,013	— ,08
243	4	+ 4 53 55,45	15,481	+9,5775	8,8207	,1897	,8030	174	,023	— ,23
244	3	+11 34 9,04	15,459	+9,4728	9,1904	,1891	,8040	177	,019	+ ,01
245	4	+51 35 50,55	15,391	—9,3674	9,7796	,1873	,8066	180	,006	+ ,17
246	4	—38 2 6,63	15,320	+9,8686	—9,6728	+1,1853	—9,8094	187	+,025	+ ,01
247	5	+51 31 6,60	15,309	—9,3711	+ ,7767	,1849	,8099	184	,021	+ ,09
248	4	—33 3 46,08	15,207	+9,8567	— ,6164	,1820	,8139	196	,007	+ ,24
249	4	—31 29 54,32	15,203	+9,8513	— ,5976	,1819	,8140	197	,004	+ ,04
250	5	— 9 31 23,11	15,030	+9,7300	— ,0926	,1770	,8205	209	,004	— ,07
251	6	+60 37 31,65	14,947	—9,5658	+9,8128	+1,1745	—9,8237	211	+,012	+ ,09
252	2	+51 41 40,02	14,805	—9,4150	+ ,7633	,1704	,8287	222	—,006	+ ,10
253	4	+37 28 25,27	14,772	—8,8261	+ ,6520	,1695	,8298	223	—,006	— ,05
254	4	+35 27 38,65	14,702	—8,6232	+ ,6292	,1674	,8323	227	+,002	— ,17
255	4	—40 57 52,78	14,647	+9,8893	— ,6803	,1657	,8342	239	—,007	+ ,04
256	4	—33 9 47,92	14,595	+9,8681	—9,6001	+1,1642	—9,8359	243	,000	— ,02
257	4	+12 13 37,17	14,157	+9,4377	+ ,1751	,1509	,8500	263	+,013	— ,08
258	4	+16 37 56,72	14,132	+9,3284	+ ,3054	,1502	,8507	266	,010	— ,02
259	3	+47 29 17,27	14,032	—9,3674	+ ,7126	,1470	,8539	268	,000	— ,14
260	4	+47 33 15,82	14,032	—9,3692	+ ,7131	,1470	,8539	269	,008	— ,02
261	2	+65 2 26,76	13,948	—9,6702	+9,8001	+1,1445	—9,8562	1	+,001	— ,07
262	4	—29 46 56,94	13,852	+9,8669	— ,5354	,1415	,8590	10	—,010	— ,09
263	4	+29 56 23,31	13,822	+8.1461	+ ,5369	,1406	,8598	9	—,001	— ,10
264	4	+16 57 55,28	13,657	+9,3032	+ ,2989	,1353	,8645	21	+,015	+ ,06
265	6	+18 28 32,25	13,498	+9,2480	+ ,3298	,1303	,8688	33	,012	+ ,08
266	4	+20 22 43,16	13,278	+9,1643	+9,3633	+1,1231	—9,8747	46	+,008	— ,16
267	2	+49 1 10,61	13,132	—9,4579	,6945	,1183	,8782	52	—,002	+ ,01
268	1	+48 28 57,05	13,101	—9,4456	,6898	,1173	,8790	53	+,008	— ,09
269	4	+54 47 57,10	13,017	—9,5694	,7249	,1145	,8810	58	+,005	+ ,10
270	2	+47 24 13,98	12,977	—9,4265	,6783	,1132	,8820	61	+,023	+ ,10

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	*s.*				
271	Persei	8	4	3 21 45,95	+4,190	+8,7967	+8,8809	+0,6222	+8,6637
272	Tauri	9	3	22 21,73	3,508	,6623	,7485	,5451	+ ,5260
273	———	9	4	25 55,73	3,415	,6404	,7404	,5334	+ ,1389
274	———	9	4	26 51,97	3,368	,6326	,7361	,5274	+ ,0716
275	———	8	5	26 56,38	3,440	,6409	,7450	,5366	+ ,1651
276	Persei	8	4	26 58,17	3,689	+8,6803	+8,7844	+0,5669	+8,3871
277	Fornacis	9	2	32 15,75	2,487	,6587	,7831	,3957	— ,3380
278	Tauri	8	5	32 38,12	3,506	,6348	,7601	,5448	+ ,2134
279	———	8	4	33 19,65	3,391	,6184	,7473	,5303	+ ,0785
280	Persei	8	5	33 48,12	4,226	,7656	,8966	,6259	+ ,6307
281	Tauri	8	4	34 6,78	3,463	+8,6250	+8,7571	+0,5394	+8,1632
282	Persei	9	4	35 10,40	4,229	,7617	,8981	,6262	,6265
283	Pleiadum	8	3	35 42,84	3,521	,6283	,7668	,5467	,2148
284	———	8	3	35 53,30	3,545	,6315	,7708	,5496	,2379
285	Camelop.	7.8	4	38 19,22	4,945	,8852	9,0346	,6942	,8220
286	Pleiadum	7.8	4	40 0,34	3,537	+8,6186	+8,7742	+0,5486	+8,2144
287	Persei	8	5	40 49,96	4,403	,7765	,9359	,6437	+8,6643
288	Pleiadum	8	7	41 36,49	3,575	,6190	,7813	,5533	+8,2398
289	Eridani	8	4	42 13,69	2,961	,5780	,7425	,4714	—8,5648
290	Pleiadum	7.8	4	42 23,94	3,575	,6168	,7824	,5533	+7,2376
291	*f′* Eridani	8	4	42 32,88	2,203	+8,6793	+8,8449	+0,3430	—8,4698
292	Cephei	6.7	4	42 59,07	9,506	9,3440	9,5131	,9780	+9,3377
293	Tauri	9	4	45 16,09	3,405	8,5864	8,7634	,5321	+8,0490
294	Eridani	8.9	3	47 2,39	2,962	8,5643	8,7485	,4716	—7,5419
295	Persei	8	1	49 10,71	3,997	8,6686	8,8622	,6017	+8,4726
296	Persei	8	4	50 15,12	4,002	+8,6660	+8,8640	+0,6023	+8,4727
297	Tauri	8.9	3	51 5,27	3,478	,5769	,7784	,5413	+8,1096
298	———	8.9	5	51 7,91	3,478	,5770	,7784	,5413	+8,1100
299	———	8.9	4	52 35,47	3,526	,5784	,7860	,5473	+8,1517
300	Eridani	8.9	3	53 58,88	3,027	,5419	,7551	,4810	—7,1024
301	Horologii	9	4	53 58,93	1,953	+8,6876	+8,9005	+0,2907	—8,5322
302	Eridani	8	4	54 45,89	3,120	,5393	,7563	,4941	+7,2016
303	———	8	4	54 47,74	3,120	,5394	,7563	,4941	+7,2204
304	Tauri	8.9	3	55 39,91	3,521	,5678	,7885	,5467	+8,1342
305	Eridani	8.9	4	55 42,61	2,435	,5942	,8149	,3865	—8,2793
306	Persei	9	2	56 36,35	4,426	+8,7228	+8,9478	+0,6459	+8,6056
307	———	7.8	4	56 39,77	3,954	,6342	,8594	,5970	,4201
308	Tauri	7.8	5	56 41,23	3,655	,5832	,8085	,5629	,2415
309	———	9		57	3,655	,5817	,8089	,5629	,2397
310	———	8.9	3	59 26,79	3,418	,5431	,7802	,5338	,0057
311	Camelop.	8.9	4	4 1 29,28	4,674	+8,7487	+8,9952	+0,6697	+8,6572
312	———	8	4	1 38,26	4,457	,7090	,9561	,6490	+8,5937
313	Eridani	9.10	4	1 59,83	2,619	,5460	,7940	,4181	—8,1030
314	Tauri	8	4	2 38,57	3,106	,5138	,7647	,4922	+7,0343
315	———	8.9	4	3 45,82	3,290	,5168	,7734	,5172	+7,7888

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of *a′*	*b′*	*c′*	*d′*	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s.	″
271	4	+47 23 17,48	+12,745	—9,4377	+9,6703	+1,1053	—9,8875	74	+,022	+0,05
272	3	+23 4 58,17	12,713	+8,9823	,3958	,1041	,8883	78	+,012	— ,10
273	5	+18 21 6,18	12,468	+9,2175	,2923	,0958	,8937	90	+,016	+ ,04
274	4	+15 55 47,37	12,404	+9,3032	,2306	,0936	,8951	92	—,005	— ,26
275	4	+19 31 8,68	12,400	+9,1643	,3155	,0932	,8953	93	+,011	— ,14
276	3	+30 34 35,44	12,394	—8,4150	+9,4980	+1,0932	—9,8953	91	+,009	— ,02
277	4	—28 33 26,52	12,034	+9,8825	— ,4578	,0804	,9029	117	+,023	+ ,05
278	4	+22 15 32,51	12,002	+8,9956	+ ,3558	,0792	,9036	115	+,018	+ ,01
279	4	+16 45 44,79	11,955	+9,2648	,2357	,0775	,9045	120	—,004	+ ,06
280	3	+47 8 13,34	11,917	—9,4683	,6394	,0762	,9053	119	+,004	+ ,02
281	4	+20 11 24,01	11,898	+9,1106	+9,3117	+1,0755	—9,9056	124	+,014	— ,15
282	4	+47 5 5,84	11,824	—9,4728	,6356	,0727	,9071	127	,018	+ ,23
283	4	+22 41 9,22	11,786	+8,9445	,3559	,0714	,9079	133	,005	— ,01
284	3	+23 49 0,90	11,773	+8,8451	,3753	,0708	,9081	135	,014	,00
285	2	+59 49 40,56	11,592	—9,6875	,6990	,0641	,9116	148	,011	— ,07
286	3	+23 12 24,40	11,482	+8,8808	+9,3538	+1,0600	—9,9136	163	+,013	+ ,05
287	5	+50 32 59,61	11,415	—9,5551	+9,6433	,0575	,9149	167	,015	— ,04
288	4	+24 39 37,36	11,367	+8,6902	+9,3742	,0555	,9168	175	,011	— ,05
289	3	— 5 34 44,80	11,323	+9,7093	—8,7388	,0540	,9165	181	,016	— ,11
290	4	+24 40 14,06	11,303	+8,6902	+9,3720	,0532	,9169	179	,027	— ,13
291		—38 7	11,304	+9,9299	—9,5417	+1,0532	—9,9169	182	+,016	
292	4	+80 13 44,89	11,242	—9,8710	+9,7425	,0508	,9180	160	—,021	+ ,03
293	2	+16 51 14,10	11,102	+9,2380	+9,2060	,0454	,9204	192	+,015	+ ,01
294	5	— 5 27 53,34	10,975	+9,7093	—8,7160	,0404	,9226	200	—,001	— ,59
295	4	+39 32 17,55	10,808	—9,3032	+9,5358	,0338	,9254	204	+,008	— ,07
296	5	+39 37 30,21	10,730	—9,3096	+9,5334	+1,0306	—9,9267	207	+,007	— ,15
297	2	+19 55 5,22	10,671	+9,0755	+9,2589	,0282	,9276	211	,012	+ ,54
298	6	+19 56 33,29	10,671	+9,0755	+9,2592	,0282	,9276	212	,017	— ,02
299	3	+21 57 37,22	10,562	+8,9243	+9,2950	,0237	,9294	219	,007	+ ,04
300	5	— 2 5 40,71	10,463	+9,6674	—8,2782	,0196	,9309	225	,011	— ,18
301	4	—44 23 6,78	10,467	+9,9571	—9,5625	+1,0198	—9,9308	230	+,014	+ ,07
302	4	+ 2 37 1,45	10,398	9,5955	+8,3772	,0169	,9319	231	,007	+ ,03
303	4	+ 2 43 38,73	10,398	9,5933	+8,3960	,0169	,9319	233	,009	— ,07
304	4	+21 36 23,13	10,332	8,9395	+9,2786	,0142	,9329	237	,023	+ ,07
305	5	—28 59 19,20	10,337	9,9004	—9,3974	,0142	,9329	241	,011	— ,05
306	1	+49 45 7,24	10,258	—9,5752	+9,5918	+1,0117	—9,9340	239	+,019	— ,14
307	4	+37 38 7,84	10,253	—9,2577	,4948	,0108	,9341	242	+,022	— ,23
308	2	+27 4 20,96	10,253	—7,6990	,3672	,0108	,9341	244	—,004	+ ,08
309	6	+27 3 52,19	10,218	—7,6990	,3654	,0094	,9346	246		— ,01
310	4	+16 51 5,65	10,047	+9,2148	,1627	,0020	,9372	250	+,019	— ,04
311	4	+54 5 41,32	9,885	—9,6542	+9,6015	+0,9950	—9,9395	257	—,006	— ,01
312	4	+50 2 51,11	9,875	—9,5888	+9,5772	,9945	,9396	259	+,021	— ,14
313	4	—21 8 26,76	9,859	+9,8567	—9,2488	,9939	,9398	2	,016	— ,06
314	4	+ 1 53 13,04	9,804	+9,6074	+8,2102	,9916	,9405	5	,006	+ ,02
315	4	+10 44 45,08	9,722	+9,4200	+8,9572	,9878	,9417	9	,018	+ ,03

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	*s.*				
316	Eridani	9.10	2	4 4 40,96	+2,919	+8,5100	+8,7701	+0,4652	—7,6110
317	Tauri	8	3	4 59,87	3,287	,5128	,7745	,5168	+7,7782
318	———	8	5	6 42,60	3,187	,5015	,7710	,5034	+7,5061
319	———	9	4	7 29,97	3,207	,4997	,7731	,5061	+7,5710
320	Persei	8	3	12 7,40	4,512	,6756	,9704	,6544	+8,5628
321	Tauri	9	4	12 26,16	3,067	+8,4787	+8,7744	+0,4867	—6,2212
322	Horologii	6.7	4	14 5,71	1,886	8,6206	8,9238	,2755	—8,4674
323	Tauri	8	2	16 35,81	3,532	8,4928	8,8085	,5480	+8,0494
324	Camelop.	9	4	17 38,42	10,067	9,2237	9,5466	1,0029	+9,2202
325	Tauri	7.8	4	18 17,38	3,538	8,4864	8,8105	0,5488	+8,0457
326	Tauri	8	3	18 58,63	3,413	+8,4701	+8,7975	+0,5331	+7,9091
327	Camelop.	8	3	20 32,93	10,208	9,2206	9,5579	1,0090	9,2144
328	Tauri	9.10	4	21 54,56	3,379	8,4548	8,7968	0,5288	7,8490
329	Persei	9	4	22 32,87	4,194	,5724	,9177	0,6226	8,4041
330	Tauri	8	4	26 3,31	3,505	,4492	,8126	0,5447	7,9755
331	Tauri	9	4	26 35,20	3,281	+8,4283	+8,7934	+0,5160	+7,6614
332	Eridani	8	2	27 27,67	2,882	,4222	,7926	,4597	—7,5986
333	———	8.9	4	29 17,19	2,878	,4143	,7942	,4591	—7,5973
334	———	9.10	2	29 29,06	3,004	,4088	,7898	,4777	—7,1228
335	———	7.8	4	30 29,26	2,341	,4708	,8571	,3694	—8,1830
336	Eridani	8	2	30 58,30	2,882	+8,4064	+8,7953	+0,4597	—7,5786
337	———	7	4	31 14,99	2,796	,4106	,8009	,4465	—7,7437
338	———	8.9	4	31 26,47	2,303	,4697	,8611	,3623	—8,1906
339	τ^b Tauri	8.9	4	32 22,26	3,585	,4295	,8263	,5545	+8,0147
340	Eridani	7.8	4	35 27,19	2,527	,4177	,8313	,4026	—8,0182
341	2*d*55 Eridani	7.8	4	35 43,32	2,869	+8,3841	+8,7995	+0,4577	—7,5832
342	———	9	4	35 54,90	2,993	,3784	,7949	,4761	—7,1599
343	Tauri	8	4	36 31,58	3,485	,3976	,8176	,5422	+7,8991
344	Eridani	8	3	37 56,16	2,396	,4230	,8506	,3795	—8,0981
345	———	7	4	38 1,39	2,573	,3988	,8272	,4104	—7,9645
346	Camelop.	8	4	38 10,12	5,901	+8,7588	+9,1891	+0,7709	+8,7200
347	Tauri	8	4	40 8,98	3,419	,3726	8,8135	,5339	+7,8026
348	Camelop.	7.8	3	40 56,02	6,109	,7684	9,2153	,7860	+8,7341
349	Orionis	8	4	41 28,84	3,215	,3521	8,8010	,5072	+7,4169
350	Cel. Sculp.	8	4	43 12,04	2,173	,4288	8,8877	,3371	—8,1913
351	Eridani	8	4	43 37,98	2,943	+8,3398	+8,8016	+0,4688	—7,3330
352	Cel. Sculp.	8	4	43 56,10	2,172	,4248	8,8882	,3367	—8,1873
353	Camelop.	7.8	4	45 55,11	7,447	,8788	9,3568	,8720	+8,8613
354	Orionis	7.8	4	46 16,41	2,991	,3225	8,8020	,4758	—7,1092
355	Camelop.	9	4	46 25,98	5,830	,7003	9,1809	,7657	+8,6588
356	Eridani	9	3	48 1,20	2,944	+8,3148	+8,8043	+0,4689	—7,3029
357	Orionis	8	4	48 24,14	3,135	,3110	8,8031	,4962	+7,3460
358	Camelop.	8.9	4	48 46,78	5,289	,6107	9,1063	,7234	+8,5490
359	Orionis	8.9	3	49 36,17	3,099	,3034	8,8033	,4912	+6,6965
360	Tauri	9	4	49 39,35	3,393	,3165	8,8169	,5306	+7,7092

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s.	″
316	4	— 7 15 32,02	+9,651	+9,7332	—8,7836	+0,9846	—9,9427	15	+,024	+0,06
317	4	+10 36 13,10	9,625	+9,4232	+8,9468	,9834	,9431	16	+,010	— ,10
318	4	+ 5 47 10,52	9,492	+9,5353	+8,6799	,9774	,9448	24	—,001	— ,29
319	5	+ 6 44 51,33	9,430	+9,5145	+8,7440	,9748	,9456	28	+,009	— ,07
320	3	+50 27 31,31	9,068	—9,6149	+9,5428	,9575	,9503	44	+,018	+ ,17
321	4	— 0 19 25,37	9,048	+9,6425	—7,3973	+0,9568	—9,9505	52	+,014	— ,02
322	2	—44 40 3,36	8,928	+9,9722	—9,4956	,9507	,9520	65	+,022	— ,38
323	4	+21 5 32,03	8,723	+8,9085	+9,1953	,9407	,9544	76	+,018	+ ,04
324	4	+80 12 4,43	8,608	—9,9117	+9,6265	,9349	,9557	59	+,022	— ,08
325	4	+21 14 56,21	8,587	+8,8808	+9,1914	,9338	,9560	82	+,019	+ ,09
326	3	+15 55 46,11	8,534	+9,2253	+9,0682	+0,9311	—9,9566	86	+,009	+ ,07
327	4	+80 19 15,02	8,375	—9,9154	+9,6148	,9230	,9583	77	+,032	— ,11
328		+14 19	8,301	+9,2878	+9,0113	,9191	,9591	106	+,010	
329	4	+42 43 57,80	8,248	—9,4757	+9,4461	,9163	,9597	107	—,008	— ,03
330	4	+19 37 28,03	7,965	+9,0043	+9,1256	,9012	,9627	119	+,011	— ,07
331	3	+ 9 49 34,73	7,928	+9,4330	+8,8311	+0,8999	—9,9630	127	+,006	— ,16
332	4	— 8 38 6,83	7,858	9,7536	—8,7698	,8953	,9638	131	+,001	+ ,02
333	3	— 8 45 47,06	7,713	9,7551	—8,7683	,8872	,9652	141	+,005	+ ,18
334	4	— 2 58 49,90	7,697	9,6821	—8,2983	,8863	,9653	142	+,006	+ ,07
335	4	—31 3 11,00	7,616	9,9289	—9,2920	,8817	,9661	151	—,010	— ,04
336		— 8 33	7,579	+9,7536	—8,7498	+0,8796	—9,9665	152	—,004	
337	2	—12 27 10,10	7,557	9,7945	—8,9094	,8783	,9667	154	+,012	+ ,02
338	3	—31 44 31,85	7,541	9,9325	—9,2964	,8774	,9669	156	+,008	+ ,04
339	2	+22 37 15,56	7,460	8,6335	+9,1560	,8727	,9676	158	—,001	— ,08
340	4	—23 29 33,58	7,215	9,8865	—9,1567	,8583	,9699	171	+,014	+ ,06
341	3	— 9 6 29,35	7,188	+9,7604	—8,7537	+0,8566	—9,9701	173	—,010	+ ,04
342	2	— 3 28 41,50	7,172	9,6893	—8,3352	,8556	,9702	174	+,023	+ ,03
343	4	+18 29 37,46	7,123	9,0607	+9,0522	,8527	,9707	177	+,002	— ,01
344	4	—28 15 22,07	7,014	9,9164	—9,2191	,8460	,9716	188	+,014	+ ,08
345	4	—21 35 19,32	7,003	9,8745	—9,1090	,8453	,9717	186	+,016	+ ,03
346	3	+66 9 1,11	6,976	—9,8338	+9,5028	+0,8436	—9,9720	180	—,037	,00
347	3	+15 35 45,34	6,828	+9,2175	+8,9624	,8343	,9732	194	+,026	— ,01
348	4	+67 30 1,61	6,746	—9,8476	+9,4927	,8290	,9739	193	—,009	+ ,06
349	4	+ 6 39 36,84	6,718	+9,5079	+8,5901	,8272	,9741	205	+,012	+ ,09
350	3	—35 22 46,52	6,580	+9,9542	—9,2788	,8183	,9752	220	+,019	+ ,03
351	3	— 5 39 32,89	6,542	+9,7202	—8,5070	+0,8157	—9,9755	219	+,023	— ,01
352	2	—35 23 12,90	6,520	+9,9547	—9,2748	,8142	,9757	223	+,030	+ ,01
353	2	+73 50 27,53	6,324	—9,8976	+9,4817	,8010	,9772	218	—,030	— ,03
354	4	— 3 29 52,83	6,321	+9,6911	—8,2845	,8008	,9772	238	+,017	+ ,08
355	4	+65 18 38,30	6,293	—9,8338	+9,4554	,7989	,9775	225	—,006	— ,06
356	4	— 5 35 23,97	6,177	+9,7202	—8,4769	+0,7908	—9,9783	248	+,012	— ,08
357	2	+ 3 1 16,02	6,144	+9,5821	+8,2101	,7884	,9786	249	+,020	+ ,03
358	4	+60 10 15,31	6,100	—9,7853	+9,4216	,7853	,9789	242	—,013	— ,20
359	4	+ 1 24 58,22	6,044	+9,6128	+7,8724	,7813	,9793	258	+,015	+ ,04
360	1	+14 17 29,19	6,038	+9,2672	+8,8716	,7809	,9793	255	+,014	— ,06

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Precession.	Logarithms of a	b	c	d
				h. m. s.	s.				
361	Orionis	8.9	3	4 50 59,82	+3,296	+8,3016	+8,8109	+0,5180	+7,5477
362	———	7	3	51 19,89	3,280	,2987	,8102	,5159	+7,5140
363	Eridani	8.9	3	51 28,95	2,652	,3138	,8262	,4236	—7,8050
364	Orionis	8	4	53 28,81	3,086	,2794	,8055	,4894	+6,4333
365	———	8.9	2	53 31,67	3,099	,2791	,8056	,4912	+6,6618
366	2 Leporis	5	3	54 18,92	2,594	+8,3020	+8,8337	+0,4140	—7,8420
367	Orionis	9	4	57 59,08	3,208	,2590	,8105	,5062	+7,2854
368	———	8.9	4	58 50,73	2,947	,2458	,8103	,4694	—7,2181
369	Aurigæ	8.9	3	59 31,40	4,439	,4024	,9728	,6473	+8,2646
370	Orionis	8.9	4	5 2 1,12	2,976	,2221	,8110	,4736	—7,0729
371	Orionis	7.8	4	2 54,87	2,796	+8,2240	+8,8197	+0,4465	—7,5365
372	Camelop.	7	3	3 11,95	9,237	,8960	9,4976	,9655	+8,8866
373	———	8	4	4 17,46	9,079	,8766	9,4868	,9580	+8,8667
374	Orionis	9	4	5 5,23	2,880	,2024	8,8159	,4594	—7,3592
375	———	7.8	4	5 40,56	2,878	,1978	8,8163	,4591	—7,3589
376	Tauri	7	4	7 9,19	3,497	+8,2038	+8,8347	+0,5437	+7,6996
377	Orionis	7	4	7 11,49	2,909	,1841	,8156	,4637	—7,2690
378	Tauri	7.8	2	7 49,26	3,541	,2024	,8396	,5491	+7,7357
379	Cel. Sculp.	7.8	2	7 57,46	2,122	,2669	,9047	,3267	—8,0362
380	Columbæ	7.8	3	8 2,83	2,400	,2250	,8634	,3802	—7,8843
381	Aurigæ	8	3	8 35,02	3,941	+8,2493	+8,8935	+0,5956	+7,9948
382	Orionis	9	4	8 59,63	2,905	,1694	,8165	,4631	—7,2624
383	———	9	4	9 37,71	3,379	,1724	,8254	,5288	+7,5374
384	———	9	4	10 48,52	3,378	,1620	,8259	,5287	+7,5259
385	———	7.8	4	11 15,90	3,122	,1469	,8145	,4944	+6,7597
386	Aurigæ	8.9	4	12 41,26	3,772	+8,1887	+8,8700	+0,5766	+7,8645
387	———	8	4	12 50.07	5,107	,3986	9,0824	,7082	+8,3237
388	Orionis	7.8	4	14 37,91	3,094	,1161	8,8155	,4905	+6,4123
389	———	8.9	4	15 55,77	3,145	,1040	8,8166	,4976	+6,8728
390	———	8	3	16 26,63	3,007	,0991	8,8165	,4781	—6,7640
391	Orionis	8.9	4	16 35,66	3,092	+8,0967	+8,8162	+0,4902	+6,3528
392	———	7.8	3	16 40,74	3,109	,0955	,8165	,4926	+6,5886
393	Tauri	9	4	18 4,45	3,442	,0981	,8336	,5368	+7,5357
394	Leporis	7.8	4	18 6,30	2,758	,0929	,8284	,4406	—7,4536
395	———	8	4	18 30,61	2,763	,0883	,8282	,4414	—7,4421
396	Tauri	8.9	4	19 13,44	3,555	+8,0972	+8,8450	+0,5508	+7,6378
397	Orionis	9	5	19 50,96	2,873	,0676	,8220	,4583	—7,2348
398	Tauri	9	4	20 21,96	3,611	,0911	,8515	,5576	+7,6722
399	Orionis	8	4	20 51,14	2,871	,0575	,8224	,4580	—7,2280
400	———	9	4	21 14,54	3,038	,0476	,8178	,4826	—6,4089
401	Orionis	7.8	3	21 20,51	3,047	+8,0468	+8,8178	+0,4839	—6,2509
402	Tauri	8.9	4	22 13,81	3,735	,0857	8,8676	,5723	+7,7405
403	Orionis	8	4	22 28,97	3,142	,0346	8,8188	,4972	+6,7836
404	Camelop.	6.7	3	23 8,17	4,974	,2595	9,0532	,6967	+8,1845
405	Tauri	7.8	4	24 44,30	3,737	,0557	8,8684	,5725	+7,7108

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s.	″
361	4	+10 8 10,37	+5,927	+9,4133	+8,7169	+0,7728	—9,9801	265	—,022	— ,22
362	2	+ 9 26 48,70	5,899	9,4330	+8,6842	,7708	,9803	267	+,018	— ,12
363	4	—18 3 44,48	5,888	9,8506	—8,9591	,7700	,9804	268	+,011	+ ,05
364	4	+ 0 48 9,45	5,721	9,6232	+7,6094	,7574	,9815	277	+,021	+ ,09
365	4	+ 1 21 51,71	5,715	9,6138	+7,8378	,7570	,9816	279	—,001	— ,20
366	4	—20 17 46,51	5,653	+9,8692	—8,9902	+0,7523	—9,9820	285	+,012	— ,04
367	4	+ 6 11 43,28	5,340	+9,5145	+8,4589	,7275	,9840	299	+,034	— ,01
368	4	— 5 23 26,16	5,272	+9,7177	—8,3923	,7220	,9844	306	+,023	— ,16
369	4	+46 43 41,36	5,200	—9,6085	+9,2766	,7164	,9848	301	+,013	+ ,17
370	3	— 4 3 52,09	5,001	+9,7007	—8,2479	,6991	,9860	2	+,007	,00
371	4	—11 51 30,74	4,928	+9,7952	—8,7032	+0,6927	—9,9865	4	+,025	— ,01
372	4	+78 7 49,21	4,866	—9,9345	+9,3758	,6872	,9868	311	+,019	+ ,05
373	4	+77 48 24,75	4,776	—9,9330	+9,3671	,6790	,9873	317	+,010	— ,02
374	4	— 8 15 54,98	4,741	+9,7543	—8,5308	,6759	,9875	12	+,030	+ ,03
375	4	— 8 20 46,09	4,690	+9,7559	—8,5304	,6712	,9878	15	+,012	+ ,04
376	4	+18 15 0,00	4,565	+9,0294	+8,8533	+0,6595	—9,9884	20	+,017	+ ,10
377	4	— 6 59 51,23	4,560	9,7396	—9,4418	,6589	,9885	24	+,002	+ ,08
378	4	+19 56 53,04	4,503	8,8751	+8,8849	,6535	,9887	25	+,006	— ,14
379	4	—36 1 3,76	4,497	9,9657	—9,1202	,6530	,9888	30	+,006	— ,04
380	4	—27 9 21,86	4,492	9,9196	—9,0097	,6524	,9888	29	+,007	+ ,10
381	2	+33 48 14,12	4,435	—9,2601	+9,0904	+0,6469	—9,9891	27	+,002	— ,01
382	4	— 7 7 21,38	4,406	+9,7419	—8,4352	,6441	,9892	33	+,007	— ,08
383	5	+13 23 13,12	4,350	+9,2923	+8,7015	,6384	,9895	38	—,007	— ,02
384	6	+13 22 23,49	4,247	+9,2923	+8,6901	,6281	,9900	46	+,008	— ,08
385	3	+ 2 20 33,34	4,213	+9,5955	+7,9354	,6246	,9902	49	+,015	— ,07
386	3	+28 18 14,44	4,087	—8,9138	+8,9853	+0,6114	—9,9908	53	+,015	+ ,04
387	3	+57 18 42,32	4,065	—9,7708	+9,2322	,6090	,9909	50	+,006	+ ,06
388	4	+ 1 7 39,25	3,928	+9,6180	+7,5883	,5941	,9915	67	+,018	+ ,07
389	4	+ 3 21 38,10	3,813	+9,5740	+8,0481	,5813	,9920	73	+,007	+ ,08
390	4	— 2 39 14,63	3,773	+9,6794	—7,9397	,5767	,9922	82	—,050	,00
391	4	+ 1 1 50,81	3,756	+9,6191	+7,5288	+0,5747	—9,9922	83	+,013	,00
392	4	+ 1 46 8,55	3,744	9,6053	+7,7644	,5734	,9923	84	—,001	— ,03
393	4	+15 53 35,53	3,634	9,1763	+8,6949	,5592	,9928	89	+,012	+ ,01
394	3	—13 16 48,16	3,624	9,8116	—8,6180	,5592	,9928	93	+,009	— ,06
395	3	—13 3 13,86	3,590	9,8096	—8,6068	,5550	,9929	96	+,007	+ ,28
396	4	+20 17 59,52	3,526	+8,8129	+8,7859	+0,5473	—9,9932	100	+,012	— ,17
397	4	— 8 28 12,90	3,475	9,7589	—8,4061	,5409	,9934	104	+,006	+ ,06
398	4	+22 24 14,29	3,429	8,4150	+8,8142	,5351	,9935	105	+,006	+ ,06
399	3	— 8 30 57,11	3,394	9,7597	—8,3993	,5307	,9937	109	+,018	+ ,09
400	4	— 1 19 29,84	3,354	9,6599	—7,5849	,5256	,9938	110	+,020	— ,17
401	4	— 0 56 13,40	3,348	+9,6532	—7,4269	+0,5248	—9,9938	111	+,010	— ,07
402	4	+26 51 13,49	3,268	—8,7634	+8,8671	,5143	,9938	115	+,011	+ ,08
403	4	+ 3 13 16,87	3,251	+9,5775	+7,9590	,5120	,9942	121	+,004	— ,05
404	3	+54 18 31,16	3,181	—9,7551	+9,1157	,5026	,9945	117	—,035	— ,05
405	4	+26 51 27,37	3,049	—8,7781	+8,8372	,4842	,9949	131	+,013	,00

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Precession.	Logarithms of a	b	c	d
				h. m. s.	s.				
406	Camelop.	8.9	3	5 27 32,46	+5,507	+8,2899	+9,1411	+0,7409	+8,2339
407	———	7	4	28 2,71	4,851	8,1868	9,0445	,6858	+8,0915
408	Aurigæ	8	4	30 13,41	3,922	8,0083	8,8957	,5935	+7,7420
409	Orionis	8.9	4	30 20,76	3,162	7,9329	8,8214	,5000	+6,7819
410	———	9	2	30 31,88	3,006	7,9294	8,8209	,4780	—6,5998
411	Orionis	7	3	30 33,41	3,006	+7,9294	+8,8209	+0,4780	—6,5998
412	———	7	5	30 58,54	2,945	,9248	,8223	,4691	—6,8890
413	Columbæ	7	2	31 14,65	2,342	,9760	,8775	,3696	—7,6576
414	———	8	2	32 10,02	2,335	,9625	,8786	,3683	—7,6472
415	Orionis	8	3	32 46,42	3,515	,9174	,8442	,5459	+7,4215
416	Orionis	9	4	32 50,04	3,523	+7,9171	+8,8450	+0,5469	+7,4279
417	Columbæ	9	2	32 56,14	2,308	7,9547	8,8826	,3632	—7,6512
418	Orionis	8.9	3	34 38,80	3,519	7,8868	8,8450	,5464	+7,3939
419	Camelop.	9	4	35 38,68	4,895	8,0736	9,0519	,6897	+7,9813
420	Orionis	9	3	38 7,66	3,440	7,8139	8,8384	,5366	+7,2449
421	Aurigæ	8	3	39 16,22	3,891	+7,8445	+8,8925	+0,5901	+7,5656
422	Tauri	8.9	3	40 7,98	3,397	,7698	,8352	,5311	7,1494
423	Orionis	8	4	42 11,01	3,539	,7344	,8482	,5489	7,2576
424	———	7	3	43 39,67	3,212	,6736	,8253	,5068	6,7047
425	———	9	4	44 22,79	3,397	,6638	,8358	,5311	7,0434
426	Leporis	9	4	44 36,76	2,560	+7,6747	+8,8524	+0,4082	—7,2264
427	Orionis	7	3	44 38,87	3,214	,6459	,8255	,5070	+6,6817
428	Columbæ	8.9	5	46 11,50	2,101	,6908	,9148	,3224	—7,4593
429	Aurigæ	8	2	48 47,46	3,764	,5545	,8756	,5756	+7,2194
430	Orionis	7.8	4	49 42,81	3,110	,4667	,8237	,4928	+5,9717
431	Orionis	9	4	50 11,41	3,345	+7,4550	+8,8327	+0,5244	+6,7633
432	———	8	4	53 23,72	3,493	,2908	,8447	,5432	6,7730
433	Geminor.	8	4	53 42,58	3,765	,2942	,8761	,5758	6,9595
434	Orionis	8	4	53 42,59	3,249	,2506	,8277	,5117	6,3776
435	———	8.9	4	55 45,96	3,437	,0817	,8398	,5362	6,5073
436	Geminor.	8	2	56 10,88	3,735	+7,0683	+8,8722	+0,5723	+6,7184
437	Orionis	6.7	4	56 13,56	3,195	7,0138	8,8258	,5045	5,9901
438	Aurigæ	7.8	4	56 15,87	4,116	7,1077	8,9279	,6145	6,8980
439	Orionis	8.9	3	56 48,48	3,364	6,9415	8,8343	,5269	6,2768
440	Camelop.	7	3	58 54,13	6,644	6,7436	9,2799	,8224	6,7153
441	1.41 Aurigæ	7	4	59 3,11	4,592	+6,4685	+9,0048	+0,6620	+6,3446
442	Leporis			6 0	2,499	—5,8010	8,8601	,3978	+5,3944
443	Camelop.	8	4	1 32,39	5,314	7,0261	9,1152	,7254	—6,9603
444	Columbæ	8	4	1 38,79	2,061	6,8167	8,9216	,3141	+6,5964
445	Aurigæ	8	3	2 44,73	4,472	7,1120	8,9855	,6505	—6,9721
446	Geminor.	9	4	4 7,81	3,663	—7,1399	+8,8632	+0,5638	—6,7498
447	———	8		4	3,663	7,1464	8,8631	,5638	—6,7557
448	Lyncis	8	3	4 26,09	5,345	7,4410	9,1198	,7279	—7,3768
449	Orionis	7	3	5 16,28	3,453	7,2240	8,8411	,5382	—6,6665
450	Monocer.	8	2	7 46,64	2,924	7,3692	8,8262	,4660	+6'4003

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of				Piazzi No.	Annual P. M.	
				a′	*b′*	*c′*	*d′*		A. R.	Decn.
		° ′ ″	″						s.	″
406	4	+61 30 20,19	+2,795	—9,8215	+9,0884	+0,4464	—9,9957	143	—,023	+0,11
407	4	+53 24 14,80	2,755	—9,7292	+9,0428	,4401	,9959	146	+,011	— ,61
408	3	+32 47 54,55	2,576	—9,2355	+8,8307	,4109	,9964	168	+,016	— ,08
409	4	+ 4 2 17,88	2,570	+9,5599	+7,9569	,4099	,9964	170	+,017	— ,08
410	2	— 2 42 0,19	2,553	+9,6803	—7,7754	,4070	,9964	173	+,005	+ ,04
411	4	— 2 41 40,42	2,553	+9,6803	—7,7754	+0,4070	—9,9964	174	—,001	+ ,07
412	2	— 5 17 40,06	2,518	9,7185	—8,0632	,4010	,9965	175	+,010	— ,05
413	4	—28 43 35,82	2,495	9,9335	—8,7767	,3970	,9966	181	+,008	+ ,08
414	4	—28 56 7,35	2,414	9,9345	—8,7654	,3827	,9968	190	—,007	+ ,07
415	3	+18 36 2,04	2,356	8,9731	+8,5743	,3721	,9970	187	—,003	+ ,08
416	2	+18 53 59,16	2,350	+8,9494	+8,5799	+0,3711	—9,9970	189	+,013	— ,15
417	4	—29 48 38,62	2,350	+9,9400	—8,7657	,3711	,9970	193	+,026	— ,28
418	4	+18 45 11,58	2,194	+8,9638	+8,5463	,3412	,9974	198	+,013	+ ,03
419	2	+53 57 43,76	2,094	—9,7396	+8,9270	,3212	,9976	199	+,012	+ ,04
420	4	+15 39 11,26	1,886	+9,1732	+8,4046	,2756	,9981	218	+,010	— ,07
421	4	+31 43 33,14	1,788	—9,1903	+8,6712	+0,2523	—9,9983	225	+,003	+ ,05
422	4	+13 51 43,21	1,717	+9,2601	8,3126	,2350	,9984	232	+,019	— ,03
423	4	+19 28 11,32	1,538	+8,8808	8,4080	,1869	,9987	245	+,009	— ,01
424	4	+ 6 9 49,69	1,410	+9,5105	7,8783	,1491	,9989	255	+,025	+ ,06
425	4	+13 50 52,22	1,346	+9,2601	8,2066	,1290	,9990	258	+,011	,00
426	2	—20 53 10,16	1,328	+9,8808	—8,3730	+0,1233	—9,9990	263	+,019	— ,27
427	4	+ 6 12 44,78	1,323	+9,5092	+7,8552	,1214	,9990	260	+,010	— ,04
428	3	—35 57 11,72	1,195	+9,9717	—8,5437	,0772	,9992	270	+,010	— ,11
429	4	+27 32 18,61	0,955	—8,8865	+8,3433	9,9804	,9995	279	+,004	+ ,04
430	4	+ 1 49 59,26	0,880	+9,6042	+7,1476	,9445	,9996	282	+,024	+ ,01
431	4	+11 44 33,16	0,838	+9,3463	+7,9302	+9,9239	—9,9996	284	+,009	+ ,07
432	4	+17 39 32,32	0,559	+9,0414	7,9281	,7479	,9998	300	+,015	+ ,07
433	2	+27 34 6,12	0,530	—8,8921	8,0833	,7247	,9998	303	+,012	+ ,09
434	4	+ 7 41 29,39	0,530	+9,4713	7,5498	,7247	,9998	305	+,015	— ,11
435	4	+15 27 3,97	0,350	+9,1818	7,6674	,5438	,9999	317	+,001	— ,04
436	4	+26 31 55,48	0,315	—8,7708	+7,8461	+9,4981	—9,9999	319	+,013	+ ,08
437	4	+ 5 25 18,79	0,305	+9,5276	,1643	9,4899	9,9999	321	—,003	— ,06
438	4	+38 5 24,38	0,303	—9,4409	,9700	9,4817	9,9999	318	+,006	— ,04
439	4	+12 29 9,58	0,257	+9,3181	,4425	9,4091	0,0000	324	+,013	+ ,02
440	4	+69 30 32,98	0,058	—9,8949	,4354	8,7657	0,0000	326	,000	— ,06
441	2	+48 44 14,55	+0,058	—9,6684	+7,3398	+8,7657	—0,0000	333	+,026	,00
442		—23 4	—0,017	+9,8982	+6,5342	—8,2428	0,0000	345		
443	4	+59 15 2,26	0,163	—9,8041	—7,8451	—9,2128	0,0000	343	+,012	— ,06
444	4	—37 1 4,47	0,158	+9,9768	+7,6747	—9,1970	0,0000	4	+,006	+ ,09
445	4	+46 25 55,93	0,268	—9,6284	—7,9865	—9,4284	0,0000	1	—,001	+ ,19
446	5	+24 1 26,03	0,379	—8,0414	—7,8865	—9,5786	—9,9999	13	+,022	— ,06
447	4	+23 59 28,10	0,383	—8,0414	—7,8925	,5852	,9999	14	00,0	— ,09
448	4	+59 36 26,39	0,420	—9,8082	—8,2569	,6230	,9999	10	+,008	— ,12
449	4	+16 4 33,38	0,483	+9,1461	—7,8253	,6847	,9999	24	,000	+ ,14
450	2	— 6 9 40,27	0,699	+9,7308	+ ,5739	,8448	,9997	44	+,013	— ,01

Digitized by Google

No.		Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of			
							a	*b*	*c*	*d*
					h. m. s.	*s.*				
451		Monocer.	9	1	6 8 11,85	+2,768	—7,3986	+8,8343	+0,4422	+6,7402
452		———	9.10		8	2,767	,4055	8,8344	,4420	+6,7476
453		———	9.10	3	8 23,67	2,925	,4006	8,8261	,4661	+6,4294
454		Aurigæ	8.9	4	8 24,31	4,813	,6212	9,0400	,6824	—7,5211
455		Canis. Maj.	6.7	3	10 9,61	2,511	,5127	8,8583	,3998	+7,0982
456		Lyncis	8.9	3	10 10,12	5,771	—7,8399	+9,1772	+0,7612	—7,7925
457		Monocer.	7.8	4	10 29,70	3,360	,5018	8,8336	,5263	—6,8319
458		Canis. Maj.	8.9	4	12 7,21	2,748	,5644	8,8355	,4390	+6,9326
459		Lyncis	8	3	12 17,35	5,245	,8504	9,1051	,7197	—7,7811
460		Monocer.	9	4	13 45,41	3,023	,6078	8,8234	,4804	+6,1396
461		Monocer.	7.8	3	14 17,45	3,158	—7,6248	+8,8240	+0,4994	—6,4499
462		———	9	3	15 5,14	3,176	,6505	,8244	,5019	—6,5624
463		Geminor.	8	3	16 23,59	3,404	,6969	,8362	,5320	—7,0861
464		Columbæ	9	4	16 33,44	2,177	,7672	,9031	,3379	+7,5124
465	15	Geminor.	9.10	3	17 59,24	3,576	,7528	,8520	,5534	—7,3049
466		Monocer.	9	4	18 14,39	3,312	—7,7369	+8,8297	+0,5201	—6,9941
467		———	8	2	18 20,33	3,080	7,7312	8,8225	,4885	—5,7001
468		Canis. Maj.	8	2	18 25,15	2,079	7,8267	8,9180	,3178	+7,6023
469		Lyncis.	9.10	4	19 56,48	5,311	8,0635	9,1144	,7252	—7,9980
470		Geminor.	9	4	20 55,85	3,566	7,8179	8,8505	,5522	—7,3626
471		Canis. Maj.	8	3	20 59,17	2,235	—7,8600	+8,8940	+0,3493	+7,5850
472		Geminor.	8	2	22 5,45	3,448	,8290	,8389	,5376	—7,2680
473		Monocer.	9	4	22 7,47	3,303	,8187	,8286	,5189	—7,0605
474	20	Geminor.	8	2	22 43,45	3,497	,8462	,8432	,5437	—7,3335
475		Monocer.	7.8	4	24 54,98	3,239	,8667	,8249	,5104	—6,9737
476		Aurigæ	7.8	3	25 22,38	3,884	—7,9408	+8,8909	+0,5893	—7,6601
477		Geminor.	8	3	25 27,21	3,471	,8913	,8403	,5404	—7,3544
478		———	7.8	4	26 23,71	3,462	,9060	,8394	,5393	—7,3611
479		———	7.8	4	28 16,22	3,674	,9582	,8618	,5651	—7,5773
480	1ν	Canis. Maj. *pr*	9	3	29 11,15	2,624	,9530	,8435	,4190	+7,4553
481		Canis. Maj.	7.8	1	30 19,49	2,248	—8,0167	+8,8905	+0,3518	+7,7381
482		———	8	4	30 52,13	2,238	8,0257	8,8919	,3499	+7,7509
483	12	Lyncis *pr.*	8	3	31 42,76	5,323	8,2642	9,1155	,7262	—8,1999
484		Canis. Maj.	8	3	31 50,84	2,637	7,9903	8,8416	,4211	+7,4814
485		Monocer.	8.9	4	32 35,02	3,167	7,9793	8,8207	,5006	—6,8526
486		Lyncis	9	4	36 28,56	4,831	—8,2503	+9,0408	+0,6840	—8,1537
487		Monocer.	8	1	37 16,58	3,129	,0359	8,8185	,4954	—6,7035
488		Canis. Maj.	8.9	3	37 20,27	2,676	,0546	8,8365	,4275	+7,5117
489		Aurigæ	8	4	37 52,28	4,450	,2042	8,9790	,6484	—8,0638
490		Canis. Maj.	7.8	3	38 55,41	2,573	,0821	8,8463	,4104	+7,6285
491		Canis. Maj.	9	3	39 2,05	2,578	—8,0831	+8,8457	+0,4113	+7,6261
492		———	8.9	4	39 5,03	2,574	,0843	,8461	,4106	+7,6303
493		———	8.9	2	40 5,09	2,565	,0954	,8468	,4091	+7,6484
494		———	8.9	1	41 22,90	2,735	,0932	,8302	,4370	+7,4835
495		Aurigæ	6.7	4	41 43,98	4,134	,1944	,9265	,6164	—7,9939

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of				Piazzi No.	Annual P. M.	
				a′	b′	c′	d′		A. R.	Decn.
		° ′ ″	″						s.	″
451		—12 40	—0,734	+9,8082	+7,9056	—9,8660	—9,9997	46	+,016	
452	8	—12 41 22,93	0,746	+9,8082	+7,9130	,8728	,9997	48		+ ,02
453	1	— 6 8 11,50	0,752	+9,7308	+7,6029	,8762	,9997	47	+,010	+ ,05
454	4	+52 34 51,48	0,764	—9,7243	—8,4808	,8829	,9997	39	+,014	— ,07
455	4	—22 38 55,92	0,903	+9,8949	+8,2395	,9559	,9996	59	+,027	— ,19
456	3	+63 42 44,18	0,921	—9,8414	—8,6148	—9,9642	—9,9995	50	+,027	— ,05
457	4	+12 21 13,74	0,923	+9,3222	—7,9979	9,9697	,9995	58	+,016	+ ,03
458	4	—13 29 27,96	1,072	+9,8162	+8,0965	0,0303	,9994	72	+,005	+ ,03
459	2	+58 29 47,27	1,113	—9,7952	—8,6753	,0465	,9993	61	+,013	— ,02
460	4	— 1 57 27,66	1,218	+9,6702	+7,3154	,0856	,9992	76	+,026	— ,08
461	2	+ 3 50 5,75	1,264	+9,5635	—7,6250	—0,1019	—9,9991	77	+,010	— ,07
462	3	+ 4 42 8,60	1,340	9,5453	—7,7371	,1271	,9990	85	—,004	— ,30
463	1	+14 10 35,19	1,450	9,2480	—8,2488	,1615	,9989	94	+,012	— ,07
464	3	—33 47 28,72	1,462	9,9614	+8,6081	,1650	,9988	97	+,014	+ ,07
465		+20 52	1,590	8,6990	—8,4514	,2014	,9986	99	+,013	
466	3	+10 24 44,93	1,613	+9,3927	—8,1629	—0,2077	—9,9986	102	+,019	— ,18
467	4	+ 0 31 39,12	1,619	+9,6284	—6,8762	,2093	,9986	105	+,026	— ,12
468	2	—36 37 5,38	1,619	+9,9745	+8,6829	,2093	,9986	112	—,001	— ,06
469	4	+59 18 25,64	1,776	—9,8028	—8,8819	,2494	,9983	106	+,001	— ,18
470	4	+20 31 26,62	1,851	+8,7559	—8,5102	,2675	,9981	120	+,023	+ ,15
471	4	—32 4 1,82	1,845	+9,9528	+8,6892	—0,2661	—9,9981	127	+,015	— ,08
472	2	+15 57 39,02	1,950	,1584	— ,4271	,2900	,9979	129	+,005	— ,06
473	4	+10 2 42,67	1,950	,4031	— ,2299	,2900	,9979	131	+,014	— ,12
474	3	+17 53 15,62	2,008	,0294	— ,4881	,3028	,9978	134	,000	+ ,04
475	3	+ 7 21 24,09	2,194	,4814	— ,1462	,3412	,9974	149	+,016	+ ,06
476	4	+31 36 10,58	2,234	—9,1818	—8,7665	—0,3491	—9,9973	150	+,013	+ ,02
477	4	+16 53 6,42	2,240	+9,1004	— ,5113	,3502	,9973	153	+,005	+ ,07
478	4	+16 34 17,01	2,321	+9,1238	— ,5188	,3657	,9971	157	+,017	+ ,03
479	4	+24 35 3,10	2,483	—8,2553	— ,7121	,3950	,9966	168	+,009	— ,06
480	2	—18 31 49,89	2,558	+9,8609	+ ,6082	,4080	,9964	178	+,009	+ ,09
481	3	—31 45 16,99	2,657	+9,9499	+8,8437	—0,4243	—9,9961	187	+,019	— ,13
482	4	—32 5 16,63	2,703	+ ,9557	+8,8551	,4318	,9960	191	+,035	— ,03
483	3	+59 35 51,24	2,795	— ,8021	—9,0802	,4464	,9957	184	—,005	— ,10
484	4	—18 2 38,86	2,795	+ ,8573	+8,6356	,4464	,9957	196	+,014	+ ,14
485	3	+ 4 17 35,13	2,858	+ ,5551	—8,0275	,4562	,9955	200	+,016	— ,13
486	4	+53 12 16,50	3,205	—9,7243	—9,1073	—0,5058	—9,9944	215	+,018	— ,03
487	4	+ 2 39 49,87	3,262	+ ,5877	—7,8792	,5135	,9942	221	+,015	— ,17
488	4	—16 34 1,68	3,268	+ ,8432	+8,6673	,5143	,9941	225	+,011	— ,05
489	3	+46 21 37,52	3,320	— ,6180	—9,0787	,5211	,9940	220	+,017	— ,03
490	3	—20 36 25,96	3,400	+ ,8768	+8,7759	,5315	,9937	233	+,023	+ ,01
491	4	—20 26 19,65	3,412	+9,8756	+8,7739	—0,5329	—9,9936	235	+,014	— ,10
492	2	—20 35 6,50	3,417	+ ,8762	+8,7777	,5337	,9936	236	+,029	— ,02
493	5	—20 55 43,69	3,498	+ ,8791	+8,7948	,5438	,9933	242	+,027	— ,04
494	3	—14 12 38,49	3,612	+ ,8215	+8,6460	,5578	,9928	249	+,016	,00
495	3	+39 3 20,68	3,653	— ,4518	—9,0601	,5626	,9927	244	+,013	— ,13

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	s.				
496	Canis. Maj.	8	3	6 43 24,66	+2,237	—8,1733	+8,8894	+0,3497	+7,9019
497	———	7.8	4	43 58,25	2,621	,1297	8,8397	,4185	+7,6387
498	h2 ———	8.9	4	44 14,69	2,264	,1777	8,8850	,3549	+7,8960
499	Lyncis	8.9	4	44 36,04	5,150	,3869	9,0889	,7118	—8,3143
500	———	8		44	5,142	,3892	9,0892	,7120	—8,3168
501	Geminor.	8		45	3,490	—8,1388	+8,8369	+0,5428	—7,6261
502	Canis. Maj.	8.9	3	45 8,00	2,181	,1986	,8973	,3387	+7,9473
503	———	9	3	46 17,13	2,637	,1503	,8373	,4211	+7,6461
504	Lyncis	8.9	4	51 31,83	4,488	,3451	,9829	,6520	—8,2126
505	Canis. Maj.	8	4	52 38,56	2,355	,2396	,8694	,3720	+7,9218
506	Geminor.	8	4	54 22,17	3,562	—8,2261	+8,8408	+0,5517	—7,7768
507	Lyncis	8.9	3	54 28,48	4,600	,3877	9,0008	,6628	—8,2702
508	Canis. Maj.	8	4	58 4,90	2,731	,2388	8,8240	,4363	+7,6413
509	Lyncis	8	4	58 28,38	4,618	,4211	9,0028	,6644	—8,3063
510	Geminor.	8.9	3	58 37,87	3,436	,2443	8,8264	,5360	—7,6815
511	Navis	8	4	58 57,33	1,846	—8,3690	+8,9480	+0,2662	+8,2060
512	Can. Min.	9	4	7 0 48,17	3,229	,2473	,8117	,5091	—7,3393
513	———	8.9	4	1 43,03	3,211	,2530	,8105	,5066	—7,2956
514	———	9	3	1 48,97	3,205	,2533	,8103	,5058	—7,2785
515	———	8	3	2 1,78	3,203	,2550	,8101	,5056	—7,2742
516	Can. Maj.	8	3	2 59,47	2,470	—8,3010	+8,8498	+0,3927	+7,9262
517	Geminor.	8	3	3 16,97	3,445	,2791	8,8249	,5372	—7,7286
518	Can. Min.	9	4	3 27,95	3,305	,2693	8,8142	,5192	—7,5286
519	———	8	4	4 46,03	3,316	,2788	8,8142	,5207	—7,5581
520	Camelop.	9	4	5 34,06	5,288	,5776	9,1065	,7233	—8,5152
521	Can. Min.	9	4	5 40,14	3,255	—8,2810	+8,8103	+0,5126	—7,4405
522	Lyncis	8	4	6 15,04	4,190	,4043	8,9290	,6222	—8,2231
523	Can. Min.	8	4	6 31,43	3,288	,2882	8,8116	,5169	—7,5178
524	Camelop.	8.9	3	7 8,26	5,396	,6039	9,1222	,7321	—8,5467
525	———	*var.*	4	7 25,34	5,338	,5974	9,1139	,7274	—8,5376
526	Can. Min.	9	4	7 36,20	3,284	—8,2947	+8,8108	+0,5164	—7,5176
527	———	8	3	8 1,21	3,287	,2974	8,8107	,5160	—7,5254
528	19 Lyncis	8	4	9 26,50	4,927	,5485	9,0511	,6837	—8,4648
529	———	8.9	3	9 28,91	4,932	,5492	9,0518	,6930	—8,4649
530	Can. Maj.	8	2	12 24,44	2,485	,3585	8,8433	,3953	+7,9790
531	M. Navis	7	3	12 59,96	1,855	—8,4613	+8,9423	+0,2683	+8,3007
532	Geminor.	8.9	2	14 33,61	3,611	,3666	,8371	,5576	—7,9626
533	———	7.8	3	15 33,86	3,864	,4081	,8723	,5870	—8,1349
534	Navis	8	3	15 55,80	2,288	,4072	,8698	,3595	+8,1279
535	Lyncis	8	3	20 40,82	4,406	,5279	,9614	,6440	—8,3911
536	Geminor.	8.9	4	21 14,43	3,733	—8,4194	+8,8497	+0,5721	—8,0903
537	Monocer.	6.7	4	21 27,67	2,909	,3700	,7992	,4637	+7,4701
538	1.*a* Geminor.	4.5	3	24 7,38	3,854	,4529	,8665	,5859	—8'1799
539	———	8	2	25 8,98	3,756	,4431	,8511	,5747	—8,1282
540	Can. Min.	8	4	26 20,17	3,190	,3926	,7943	,5038	—7,3846

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	Logarithms of b′	Logarithms of c′	Logarithms of d′	Piazzi No.	Annual P. M. A.R.	Annual P. M. Decn.
		° ′ ″	″						s.	″
496	4	—32 21 26,53	—3,784	+9,9508	+9,0046	—0,5780	—9,9921	258	+,010	+0,07
497	4	—18 49 28,07	3,836	+9,8621	+8,7909	,5839	,9919	260	—,054	,00
498	2	—31 30 50,91	3,859	+9,9460	+9,0028	,5864	,9918	262	+,007	+ ,07
499	3	+57 47 19,94	3,905	—9,7774	—9,2171	,5916	,9916	255	+,008	— ,11
500	2	+57 49 52,96	3,922	—9,7774	—9,2191	,5935	,9915	256		— ,01
501	4	+17 52 55,90	3,939	+9,0492	—8,7806	—0,5954	—9,9914	265		— ,04
502	4	—34 5 10,58	3,933	+9,9586	+9,0414	,5947	,9915	268	+,017	+ ,09
503	3	—18 14 48,57	4,036	+9,8567	+8,7997	,6059	,9910	272	+,020	+ ,18
504	4	+47 29 8,31	4,498	—9,6284	—9,2185	,6530	,9888	298	+,012	+ ,02
505	4	—28 44 25,47	4,577	+9,9269	+ ,0407	,6606	,9884	307	+,016	+ ,19
506	4	+20 49 48,34	4,730	+8,7853	—8,9236	—0,6749	—9,9876	311	+,005	+ ,19
507	4	+49 42 33,91	4,747	—9,6628	—9,2569	,6764	,9875	309	—,009	— ,11
508	4	—14 37 43'77	5,041	+9,8228	+8,8030	,7025	,9858	328	+,010	— ,08
509	4	+50 9 18,63	5,081	—9,6674	—9,2891	,7059	,9856	326	—,063	— ,16
510	1	+15 47 29,85	5,075	+9,1818	—8,8407	,7054	,9856	329	+,009	+ ,18
511	1	—43 23 20,09	5,109	+9,9908	+9,2433	—0,7083	—9,9854	337	—,007	+ ,09
512	4	+ 7 6 13,69	5,272	9,4941	—8,5120	,7220	,9844	342	+,015	+ ,11
513	4	+ 6 19 58,19	5,351	9,5119	—8,4691	,7284	,9839	345	+,017	— ,22
514	2	+ 6 4 44,01	5,365	9,5185	—8,4521	,7289	,9839	347	+,060	,00
515	3	+ 5 59 58,28	5,379	9,5198	—8,4497	,7307	,9838	1	+,012	— ,09
516	3	—24 56 55,88	5,452	+9,9025	+9,0597	—0,7365	—9,9833	14	—,003	— ,13
517	4	+16 21 11,90	5,485	+9,1614	—8,8867	,7392	,9831	9	+,013	+ ,03
518	4	+10 27 51,64	5,497	+9,4014	—8,6974	,7401	,9830	12	+,014	— ,21
519	3	+10 57 49,14	5,609	+9,3838	—8,7262	,7489	,9823	23	+,015	+ ,07
520	4	+59 58 51,70	5,687	—9,7875	—9,3904	,7549	,9818	20	+,021	— ,11
521	3	+ 8 18 32,03	5,681	+9,4639	—8,6119	—0,7545	—9,9818	26	+,015	— ,01
522	4	+41 13 44,67	5,737	—9,4843	9,2756	,7587	,9814	28	+,008	+ ,09
523	4	+ 9 46 34,39	5,754	+9,4249	8,6875	,7600	,9813	34	+,019	— ,05
524	3	+61 13 24,36	5,816	—9,7993	9,4053	,7646	,9809	30	+,004	+ ,21
525	4	+60 37 14,61	5,838	—9,7931	9,4045	,7662	,9807	33	+,012	— ,13
526	5	+ 9 37 6,21	5,843	+9,4281	—8,6875	—0,7667	—9,9807	40	+,012	— ,04
527	4	+ 9 44 50,07	5,877	+9,4249	—8,6952	,7691	,9805	43	—,013	— ,04
528	1	+55 34 58,80	6,010	—9,7340	—9,3933	,7789	,9795	47	+,034	— ,11
529	4	+55 38 23,08	6,010	—9,7340	—9,3936	,7789	,9795	49	+,024	— ,13
530	3	—24 39 36,82	6,238	+9,8982	+9,1136	,7950	,9779	73	—,004	— ,09
531	4	—43 41 23,49	6,288	+9,9868	+9,3359	—0,7985	—9,9775	82	+,018	+ ,02
532	3	+23 14 26,54	6,426	+8,3979	—9,1020	,8079	,9764	84	+,016	— ,10
533	4	+32 12 45,62	6,509	—9,1367	—9,2384	,8135	,9758	89	—,005	+ ,08
534		—31 44	6,531	+9,9375	+9,2338	,8150	,9756	93	+,005	,00
535	4	+46 52 26,43	6,932	—9,5888	- 9,4021	,8408	,9723	112	+,005	— ,01
536	5	+27 57 31,16	6,976	—8,7482	—9,2125	—0,8436	—9,9720	118	+,008	— ,04
537	4	— 7 13 28,04	6,992	+9,7396	+8,6427	,8446	,9718	120	+,012	+ ,19
538	4	+32 14 26,26	7,215	—9,1173	—9,2833	,8583	,9699	127	,000	— ,08
539		+28 58	7,297	—8,8513	—9,2463	,8631	,9691	136	+,018	
540	3	+ 5 38 56,01	7,390	+9,5327	—8,5586	,8686	,9683	142	+,011	— ,08

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.			Annual Preces-sion.	Logarithms of			
								a	*b*	*c*	*d*
				h.	*m.*	*s.*	*s.*				
541	Canis Min.	7.8	4	7	26	22,02	+3,146	—8,3914	+8,7931	+0,4977	—7,1933
542	Navis	7	3		27	18,52	2,403	,4502	,8464	,3807	+8,1249
543	Canis Min.	7	5		27	50,87	3,203	,4004	,7936	,5056	—7,4349
544	———	7.8	4		28	37,53	3,193	,4037	,7926	,5042	—7,4058
545	Navis	8.9	3		28	57,59	2,538	,4394	,8268	,4045	+8,0348
546	Camelop. *pre.*	8.9	4		30	14,04	5,778	—8,7926	+9,1718	+0,7618	—8,7518
547	——— *seq.*	9	4		30	14,44	5,778	,7926	9,1718	,7618	—8,7518
548	K^2 Navis	7.8			32		2,457	,4649	8,8357	,3904	+8,1134
549	Canis Min.	8	5		32	10,68	3,163	,4189	8,7889	,5001	—7,3070
550	Geminor.	9	3		34	4,05	3,629	,4677	8,8274	,5598	—8,0874
551	Monocer.	8	4		34	40,38	3,080	—8,4284	+8,7856	+0,4885	—6,4236
552	———	8.9	4		37	38,24	2,955	,4427	,7850	,4706	+7,4082
553	Navis	7.8	3		37	49,16	2,190	,5325	,8741	,3404	+8,3000
554	2^1 ———	8.9	4		37	56,30	2,758	,4556	,7965	,4406	+7,8483
555	2^2 ———	7.8	4		37	56,57	2,758	,4559	,7965	,4406	+7,8485
556	Camelop.	5.6	4		'38	38,74	9,876	—9,2032	+9,5378	+0,9946	—9,1964
557	Navis	8.9	2		38	38,78	2,142	8,5445	8,8818	,3308	+8,3273
558	———	8	3		40	20,04	2,139	,5525	8,8815	,3302	+8,3372
559	Lyncis	7.8	4		40	29,26	3,872	,5324	8,8601	,5879	—8,2758
560	Monocer.	8	2		42	17,94	2,881	,4649	8,7841	,4595	+7,6487
561	Monocer.	7.8	2		42	18,81	3,001	—8,4607	+8,7796	+0,4773	+7,2075
562	Navis	8	2		44	26,01	2,680	,4897	8,7986	,4281	+7,9781
563	Geminor.	8.9	4		44	27,24	3,838	,5435	8,8518	,5841	—8,2761
564	Monocer.	7.8	3		44	42,01	2,963	,4708	8,7784	,4717	+7,4125
565	Camelop.	8.9	4		45	7,66	5,655	,8482	9,1530	,7524	—8,8060
566	Monocer.	8.9	4		46	18,45	3,019	—8,4756	+8,7756	+0,4799	+7,0945
567	Canis Min.	7.8	2		48	21,88	3,257	,4886	8,7787	,5128	—7,6861
568	Navis	9	2		49	28,20	2,575	,5217	8,8068	,4108	+8,1061
569	Lyncis	8	4		49	55,91	4,733	,7260	9,0083	,6751	—8,6371
570	Monocer.	8.9	2		50	18,40	3,002	,4907	8,7721	,4774	+7,2375
571	Cancri	7.8	4		51	14,26	3,504	—8,5213	+8,7981	+0,5446	—8,0605
572	———	8	3		52	31,81	3,500	,5259	,7965	,5441	—8,0637
573	Navis	8	4		53	1,53	2,571	,5355	,8043	,4101	+8,1259
574	Cancri	7.8	3		53	27,10	3,391	,5173	,7840	,5303	—7,9414
575	Monocer.	8	2		56	45,97	3,006	,5133	,7653	,4780	+7,2369
576	Lyncis	8	4		59	30,11	3,907	—8,6137	+8,8534	+0,5918	—8,3822
577	Cancri	9	4	8	0	5,72	3,292	,5317	,7691	,5175	—7,8110
578	Monocer.	8.9	4		0	22,77	3,086	,5249	,7608	,4894	—6,7368
579	Cancri	8	4		1	22,93	3,263	,5343	,7658	,5136	—7,7579
580	Monocer.	8	4		2	4,38	2,942	,5328	,7615	,4686	+7,5720
581	Cancri	8	2		2	48,25	3,444	—8,5547	+8,7802	+0,5371	—8,0478
582	Navis	9	4		3	43,07	2,685	,5584	,7803	,4289	+8,0598
583	Cancri	8	3		4	34,20	3,297	,5466	,7646	,5181	—7,8402
584	Lyncis	7	4		5	35,96	4,674	,7790	,9923	,6697	—8,6904
585	Cancri	8	2		6	16,56	3,439	,5656	,7760	,5364	—8,0571

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
	′	° ′ ″	″						s.	″
541	4	+ 3 37 38,16	—7,390	+9,5729	—8,3685	—0,8686	—9,9683	143	+,018	+0,02
542	4	—28 12 57,90	7,470	+9,9143	+9,2461	,8733	,9675	148	+,013	+ ,05
543	4	+ 6 13 11,63	7,514	+9,5198	—8,6085	,8759	,9671	150	+,001	+ ,14
544	4	+ 5 45 55,05	7,579	+9,5302	—8,5797	,8796	,9665	158	+,013	+ ,02
545	2	—23 11 22,97	7,660	+9,8831	+9,1743	,8808	,9663	165	+,003	+ ,05
546	1	+65 32 13,62	7,724	—9,8195	—9,5450	—0,8878	—9,9651	159	—,018	+ ,15
547	7	+65 32 21,66	7,724	—9,8195	—9,5450	,8878	,9651	160	—,013	+ ,08
548	3	—26 26 4,51	7,853	+9,9025	+9,2416	,8950	,9638	177		+ ,12
549	2	+ 4 27 4,75	7,863	+9,5575	—8,4818	,8956	,9637	174	+,007	+ ,10
550	4	+24 37 35,06	8,024	+8,1139	—9,2221	,9044	,9621	182	+,001	— ,07
551	4	+ 0 34 16,72	8,062	+9,6284	—7,6000	—0,9064	—9,9617	189	+,010	— ,03
552	4	— 5 17 14,34	8,296	,7126	+8,5824	,9188	,9592	202	+,011	— ,11
553	3	—35 49 47,52	8,307	,9469	+9,3849	,9194	,9591	206	+,017	— ,04
554	4	—14 17 33,84	8,317	,8102	+9,0107	,9200	,9590	204	+,019	— ,12
555	4	—14 17 50,11	8,322	,8102	+9,0110	,9202	,9589	205	+,007	— ,15
556	4	+79 54 33,10	8,418	—9,9124	—9,6164	—0,9252	—9,9579	187	—,017	— ,16
557	2	—37 19 52,61	8,375	+ ,9523	+9,4038	,9230	,9583	209	+,046	+ ,01
558		—37 32	8,508	+ ,9523	+9,4126	,9298	,9569	218	+,013	
559	4	+33 38 24,41	8,529	— ,1492	—9,3723	,9309	,9566	215	+,008	+ ,01
560	2	— 8 46 28,91	8,665	+ ,7536	+8,8197	,9378	,9551	228	+,018	,00
561	4	— 3 11 15,83	8,671	+9,6839	+8,3829	—0,9381	—9,9550	227	+,009	+ ,03
562	4	—17 56 30,56	8,833	+ ,8395	+9,1330	,9461	,9531	241	+,017	+ ,15
563	4	+32 42 25,37	8,844	— ,0792	—9,3773	,9466	,9530	238	—,013	— ,10
564	4	— 5 0 38,77	8,854	+ ,7076	+8,5869	,9472	,9528	242	+,005	— ,17
565	3	+65 10 40,78	8,901	— ,8000	—9,6053	,9495	,9523	236	+,022	— ,19
566	5	— 2 22 20,04	8,980	+9,6730	+8,2702	—0,9533	—9,9513	247	+,005	,00
567	4	+ 9 4 25,41	9,146	+ ,4609	—8,8568	,9612	,9493	258	+,006	— ,05
568	3	—22 34 16,13	9,229	+ ,8704	+9,2475	,9652	,9483	264	+,029	+ ,05
569	4	+54 34 26,35	9,276	— ,6730	—9,5764	,9673	,9477	260	+,007	— ,11
570	4	— 3 11 59,49	9,291	+ ,6830	+8,4129	,9681	,9475	268	+,014	+ ,08
571	4	+20 15 32,10	9,368	+9,0043	—9,2089	—0,9717	—9,9465	272	+,003	— ,08
572	4	+20 11 4,42	9,471	,0128	—9,2123	,9764	,9451	280	+,013	— ,15
573	4	—22 54 22,60	9,502	,8710	+9,2662	,9778	,9447	287	+,025	+ ,04
574	4	+15 23 55,59	9,538	,2648	—9,1016	,9795	,9442	286	+,009	— ,05
575	4	— 3 2 7,98	9,925	,6803	+8,4123	,9907	,9408	300	+,014	+ ,18
576	4	+35 56 21,18	10,003	—9,1987	—9,4666	—1,0001	—9,9378	308	+,022	— ,27
577	4	+10 58 58,13	10,042	+ ,4166	—8,9791	,0018	,9372	313	+,019	— ,01
578	1	+ 0 55 57,61	10,067	+ ,6232	—7,9128	,0029	,9369	315	+,004	+ ,04
579	4	+ 9 38 39,70	10,142	+ ,4533	—8,9278	,0061	,9358	322	+,004	— ,06
580	1	— 6 15 57,88	10,193	+ ,7202	+8,7455	,0083	,9350	2	+,026	— ,04
581	1	+18 7 56,40	10,247	+9,1614	—9,2017	—1,0106	—9,9342	6	+,016	— ,37
582	4	—18 29 29,07	10,313	+ ,8351	+ ,2129	,0134	,9333	12	+,019	+ ,03
583	4	+11 20 19,62	10,382	+ ,4099	— ,0077	,0163	,9321	13	+,010	— ,01
584	4	+54 38 26,97	10,462	— ,6484	— ,6291	,0196	,9309	15	+,014	— ,15
585	4	+18 4 3,63	10,512	+ ,1732	— ,2113	,0217	,9301	20	+,012	— ,05

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a	b	c	d
				h. m. s.	s.				
586	Navis	7	3	8 6 50,85	+1,884	—8,7044	+8,9131	+0,2751	+8,5626
587	Cancri	8	3	7 20,41	3,266	,5532	,7594	,5140	—7,7886
588	———	8	3	7 23,87	3,660	,5992	,8051	,5635	—8,2642
589	Lyncis	8	3	7 36,56	4,610	,7754	,9799	,6637	—8,6816
590	Cancri	8	1	8 46,54	3,260	,5573	,7573	,5132	—7,7824
591	Cancri	8	3	9 29,98	3,259	—8,5595	+8,7564	+0,5131	—7,7839
592	Navis	8	4	9 52,24	2,750	,5710	,7645	,4393	+8,0056
593	Cancri	8	3	13 25,12	3,288	,5729	,7538	,5169	—7,8600
594	———	8.9	4	14 2,26	3,443	,5900	,7681	,5369	—8,0948
595	———	9	5	16 41,15	3,670	,6305	,7977	,5647	—8,3101
596	Cancri	7.8	3	16 54,11	3,584	—8,6176	+8,7840	+0,5544	—8,2446
597	———	7.8	3	17 55,64	3,226	,5818	,7442	,5087	—7,7343
598	Navis	6	3	18 2,19	2,589	,6153	,7773	,4131	+8,2166
599	Monoccr.	8	3	20 12,50	3,031	,5840	,7369	,4816	+7,1232
600	———	8	2	24 1,70	2,697	,6179	,7558	,4309	+8,1298
601	Monocer.	8	3	24 24,09	3,019	—8,5951	+8,7315	+0,4799	+7,2574
602	———	8.9	4	25 16,31	3,023	,5973	,7302	,4804	+7,2253
603	Hydræ	7.8	4	26 52,13	3,129	,6017	,7283	,4954	—7,3597
604	Cancri	8	3	29 40,79	3,459	,6357	,7513	,5389	—8,1746
605	3 Leo. Min.	7.8	5	29 41,71	3,764	,6860	,8013	,5756	—8,4254
606	Cancri	8	1	29 43,74	3,457	—8,6356	+8,7509	+0,5387	—8,1728
607	Pixid Naut.	7 8	2	30 4,50	2,555	,6547	,7689	,4074	+ ,2945
608	4 Leo. Min.	7	2	30 7,39	3,742	,6831	,7969	,5731	— ,4134
609	Cancri	8	3	30 15,99	3,466	,6383	,7515	,5398	— ,1853
610	———	8	2	30 53,26	3,445	,6384	,7490	,5372	— ,1742
611	Cancri	8	4	31 47,06	3,473	—8,6432	+8,7504	+0,5407	—8,1986
612	Monocer.	9	2	35 33,42	2,948	,6251	,7177	,4695	+7,6877
613	Cancri	8	3	36 8,89	3,433	,6491	,7392	,5357	—8,1704
614	10 Hydræ	7	3	36 19,90	3,182	,6266	,7162	,5027	—7,1647
615	Lyncis	9.10	5	36 33,36	4,468	,8506	,9389	,6501	—8,7559
616	Hydræ *pre.*	8	4	37 3,46	3,032	—8,6260	+8,7127	+0,4817	+7,1724
617	——— *seq.*	7.8	3	37 3,80	3,032	,6260	,7127	,4817	+7,1724
618	Cancri	8.9	2	37 29,13	3,272	,6350	,7202	,5148	—7,9227
619	Navis	9	3	38 53,33	2,142	,7589	,8389	,3308	+8,5847
620	Cancri	8	3	39 43,76	3,308	,6434	,7199	,5196	—8,0015
621	Lyncis	8	4	40 39,64	4,207	—8,8100	+8,8826	+0,6240	—8,6822
622	Cancri	9	3	41 39,57	3,410	,6595	,7285	,5327	— ,1636
623	Navis	7	3	42 14,54	2,159	,7652	,8324	,3342	+ ,5914
624	Pixid Naut.	7	4	43 10,21	2,511	,6970	,7604	,3998	+ ,3808
625	———	6.7	4	43 11,98	2,432	,7118	,7752	,3860	+ ,4383
626	3 H Navis	7.8	4	43 32,97	2,229	—8,7542	+8,8163	+0,3481	+8,5598
627	Cancri	8	3	44 31,91	3,445	,6710	,7291	,5372	—8,2167
628	———	7.8	8	44 35,04	3,397	,6647	,7225	,5311	—8,1582
629	———	9	4	44 37,73	3,337	,6578	,7153	,5234	—8,0713
630	Hydræ *pre.*	8	4	45 9,93	3,227	,6491	,7049	,5088	—7,8443

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a′	Logarithms of b′	Logarithms of c′	Logarithms of d′	Piazzi No.	Annual P. M. A. R.	Annual P. M. Decn.
		° ′ ″	″						s	″
586	3	−46 9 18,92	−10,542	+9,9605	+9,5791	−1,0229	−9,9297	29	+,016	+0,03
587	4	+ 9 54 10,25	10,587	+9,4487	−8,9581	,0247	,9290	26	+,007	— ,20
588	4	+27 32 56,11	10,592	−7,9031	−9,3881	,0249	,9289	24	+,010	— ,01
589	3	+53 42 4,49	10,617	−9,6294	−9,6302	,0260	,9285	23	+,004	— ,03
590	4	+ 9 40 0,61	10,696	+9,4564	−8,9523	,0292	,9272	34	+,010	— ,10
591	4	+ 9 39 14,55	10,742	+9,4579	−8,9538	−1,0314	−9,9263	36	+,007	— ,14
592	1	−15 46 56,30	10,774	+9,8109	+9,1650	,0324	,9259	39	+,024	— ,08
593	2	+11 10 47,32	11,033	+9,4216	−9,0278	,0427	,9216	48	+,016	+ ,04
594	3	+18 39 24,39	11,082	+9,1614	−9,2471	,0446	,9208	51	+,023	+ ,02
595	4	+28 35 32,12	11,276	−8,1761	−9,4300	,0521	,9174	61	+,003	+ ,01
596	3	+25 4 0,19	11,290	+8,6335	−9,3778	−1,0527	−9,9171	66	−,003	— ,25
597	4	+ 8 10 55,46	11,362	9,4955	−8,9059	,0555	,9158	70	+,010	— ,06
598	3	−23 31 3,76	11,368	9,8615	+9,3550	,0556	,9157	74	+,005	— ,02
599	3	— 1 58 42,74	11,530	9,6646	+8,2990	,0618	,9127	81	−,001	— ,02
600	4	−18 57 21,63	11,796	9,8280	+9,2816	,0717	,9077	94	+,001	+ ,07
601	4	— 2 37 38,78	11,823	+9,6721	+8,4330	−1,0727	−9,9071	97	+,018	— ,06
602	4	— 2 25 18,28	11,884	+9,6702	+8,4010	,0750	,9059	100	+,011	— ,02
603	4	+ 3 18 9,78	11,997	+9,5877	−8,5351	,0791	,9037	107	+,004	— ,04
604	2	+20 14 47,66	12,192	+9,1238	−9,3230	,0861	,8997	118	+,021	— ,10
605	4	+33 17 59,65	12,197	−8,8573	−9,5237	,0862	,8996	117	+,009	— ,04
606		+20 9	12,197	+9,1271	−9,3214	−1,0862	−9,8996	119	+,015	
607	3	−25 50 52,38	12,216	+9,8669	+ ,4247	,0869	,8992	125	+,006	— ,03
608	4	+32 30 59,00	12,225	−8,7781	— ,5155	,0872	,8990	120	+,005	+ ,05
609	4	+20 39 32,10	12,234	+9,1038	— ,3326	,0876	,8988	121	+,015	,00
610	2	+20 6 19,29	12,280	+9,1367	— ,3230	,0892	,8978	128	+,019	— ,14
611	4	+21 3 15,01	12,340	+9,0864	−9,3446	−1,0913	−9,8965	135		+ ,08
612	1	— 6 38 0,48	12,597	9,7168	+9,8609	,1002	,8909	151	+,004	— ,05
613	4	+19 24 24,55	12,613	9,1790	−9,3212	,1018	,8899	156	−,009	— ,05
614	3	+ 6 16 14,69	12,650	9,5366	−8,8382	,1021	,8897	157		+ ,04
615	4	+53 31 28,64	12,641	−9,5623	−9,7062	,1029	,8892	153	,000	— ,06
616	3	— 2 0 34,83	12,700	+9,6637	+8,3482	−1,1038	−9,8885	159	+,001	,00
617	4	— 2 0 34,21	12,700	,6637	+8,3482	,1038	,8885	160	+,004	— ,04
618	4	+11 11 15,93	12,727	,4407	−9,0904	,1047	,8879	161	+,001	— ,03
619	3	−42 1 44,45	12,817	,9227	+9,6316	,1078	,8858	169	+,024	— ,41
620	2	+13 11 46,41	12,879	,3944	−9,1660	,1099	,8844	171	+,024	+ ,02
621	4	+48 10 46,31	12,946	−9,4472	−9,6824	−1,1121	−9,8828	174	+,007	— ,23
622	2	+18 38 24,29	13,008	+9,2258	— ,3164	,1142	,8813	181	+,021	+ ,06
623	2	−41 51 37,70	13,039	9,9191	+ ,6377	,1152	,8805	187	+,023	+ ,05
624	2	−28 51 18,50	13,106	9,8722	+ ,4992	,1174	,8789	188	+,023	+ ,12
625	4	−32 10 16,96	13,106	9,8865	+ ,5419	,1174	,8789	190	+,003	— ,02
626	2	−39 42 50,62	13,128	+9,9122	+9,6219	−1,1182	−9,8783	194	+,009	— ,07
627	4	+20 34 56,12	13,198	,1523	— ,3642	,1205	,8766	195	−,004	— ,01
628	5	+18 9 38,43	13,203	,2504	— ,3121	,1206	,8765	196	+,009	— ,01
629	4	+15 1 22,53	13,207	,3502	— ,2323	,1208	,8763	197	+,023	— ,13
630	4	+ 9 2 11,99	13,237	,4928	— ,0150	,1218	,8756	200	+,021	+ ,03

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Precession.	Logarithms of *a*	*b*	*c*	*d*
				h. m. s.	*s.*				
631	Hydræ *seq.*	9	4	8 45 10,21	+3,227	—8,6491	+8,7049	+0,5088	—7,8443
632	2,17 ———	9	4	47 27,55	2,940	,6523	,6991	,4683	+7,7593
633	Cancri	7		47	3,393	,6709	,7175	,5306	—8,1632
634	Hydræ	9	4	51 40,09	3,036	,6577	,6885	,4823	+7,1820
635	———	9	4	52 58,72	3,036	,6604	,6881	,4823	+7,1847
636	Hydræ	8.9	3	53 9,68	3,175	—8,6631	+8,6882	+0,5017	—7,7023
637	———	8	4	53 18,01	3,054	,6608	,6854	,4849	+6,8321
638	———	8.9	3	53 56,18	2,937	,6660	,6882	,4679	+7,7958
639	Cancri	9	4	54 14,70	3,324	,6773	,6983	,5217	—8,0851
640	ρ ———	8	2	54 22,63	3,594	,7192	,7397	,5556	—8,3986
641	Lyncis	9.10	1	55 25,20	3,849	—8,7750	+8,7915	+0,5853	—8,5747
642	Monocer.	8	3	55 52,49	2,833	,6785	,6934	,4522	+8,0555
643	74 Cancri	9	3	59 3,95	3,328	,6878	,6906	,5222	—8,1105
644	Hydræ	8.9	4	59 43,61	3,038	,6735	,6737	,4826	+7,1746
645	Navis	8.9	4	9 0 37,53	2,196	,8097	,8067	,3416	+8,6423
646	Pix. Naut.	7	4	1 29,47	2,627	—8,7199	+8,7136	+0,4195	+8,3488
647	———	8	4	2 34,18	2,630	,7218	,7114	,4200	+8,3501
648	Hydræ	8	4	4 19,31	2,967	,6844	,6672	,4723	+7,7225
649	Monocer.	7	4	4 28,42	2,748	,7066	,6889	,4390	+8,2211
650	Hydræ	9	1	4 50,19	3,140	,6840	,6650	,4969	—7,5770
651	Cancri	9	5	4 54,03	3,511	—8,7280	+8,7086	+0,5454	—8,3646
652	Hydræ	7.8	4	5 14,22	2,825	,6979	,6775	,4510	+8,1038
653	———	8	4	6 17,41	2,839	,6984	,6739	,4532	+8,0826
654	———	8	4	6 31,62	3,006	,6868	,6612	,4780	+7,5138
655	Navis	7.8	3	6 59,00	2,355	,7897	,7627	,3720	+8,5785
656	Cancri	8	4	7 14,29	3,391	—8,7127	+8,6844	+0,5303	—8,2358
657	Hydræ	7	2	7 30,90	2,939	,6919	,6625	,4682	+7,8390
658	Navis	7.8	1	9 19,87	2,388	,7880	,7521	,3780	+8,5669
659	Hydræ	7	4	9 21,25	2,844	,7037	,6675	,4539	+8,0848
660	Leonis	8.9	4	10 25,12	3,543	,7461	,7057	,5494	—8,4156
661	Hydræ	7.8	3	11 13,83	3,160	—8,6962	+8,6530	+0,4997	—7,7070
662	———	6.7	3	11 48,85	2,826	,7104	,6648	,4512	+8,1281
663	———	7	4	12 11,72	3,081	,6957	,6486	,4887	—6,8754
664	———	7	4	12 20,95	2,928	,7012	,6536	,4666	+7,8915
665	Leonis	7.8	4	12 21,07	3,287	,7086	,6610	,5168	—8,0862
666	Hydræ	8.9	3	13 10,21	2,831	—8,7121	+8,6615	+0,4519	+8,1228
667	———	9	2	14 42,13	3,133	,7017	,6143	,4960	—7,5658
668	———	9.10	3	15 43,32	2,990	,7030	,6424	,4765	+7,6134
669	Ursæ Maj.	8.9	4	16 1,76	4,056	,8804	,8186	,6081	—8,7546
670	Hydræ	9	3	16 47,58	3,144	,7051	,6403	,4975	—7,6424
671	Hydræ	9	3	17 18,57	2,981	—8,7063	+8,6396	+0,4744	+7,7034
672	Leonis	8	3	17 31,55	3,340	8,7248	,6573	,5237	—8,2001
673	*h* Ursæ Maj.	7	4	18 31,84	4,821	9,0605	,9890	,6831	—9,0133
674	Hydræ	8.9	3	20 49,61	3,038	8,7101	,6298	,4826	+7,2637
675	———	8.9	4	22 44,07	2,995	8,7144	,6269	,4764	+7,6503

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A.R.	Decn.
		° ′ ″	″						s	″
631	3	+ 9 2 4,75	—13,237	+9,4928	—9,0150	—1,1218	—9,8756	201	+,007	+0,04
632	4	— 7 20 49,85	13,390	,7202	+8,9318	,1268	,8716	215	+,019	— ,08
633	3	+18 6 21,48	13,394	,2553	—9,3173	,1269	,8715	213		+ ,02
634	4	— 1 54 49,83	13,661	,6609	+8,3578	,1355	,8644	228	+,008	+ ,02
635	4	— 1 55 15,68	13,746	,6609	+8,3505	,1382	,8620	235	—,005	+ ,01
636	4	+ 6 17 31,68	13,759	+9,5453	—8,8758	—1,1386	—9,8616	236	+,021	+ ,04
637	4	— 0 50 14,09	13,768	9,6484	+8,0082	,1388	,8614	237	+,018	— ,14
638	4	— 7 43 52,24	13,803	9,7226	+8,9679	,1400	,8603	238	+,012	— ,06
639	4	+14 49 33,88	13,828	9,3692	—9,2465	,1407	,8597	240	+,045	— ,17
640	4	+28 32 32,57	13,834	8,5441	— 9,5184	,1410	,8595	239	+,010	— ,03
641	1	+39 5 27,58	13,902	—9,0682	—9,6408	—1,1431	—9,8575	243	—,020	+ ,11
642	3	—13 47 30,70	13,928	+9,7723	+9,2189	,1439	,8568	246	+,010	+ ,16
643	4	+15 22 1,20	14,128	9,3617	—9,2709	,1501	,8509	257	+,039	— ,13
644	4	— 1 49 4,83	14,169	9,6590	+8,3604	,1513	,8496	260	+,010	+ ,03
645	4	—42 50 35,69	14,223	9,9015	+9,6836	,1530	,8480	266	,000	+ ,11
646	3	—25 10 47,03	14,275	+9,8401	+9,4815	—1,1546	—9,8463	268	+,001	— ,12
647	4	—25 8 29,02	14,341	,8388	+9,4830	,1566	,8442	5	+,018	— ,11
648	4	— 6 15 40,45	14,450	,7060	+8,8960	,1599	,8407	10	+,020	— ,07
649	4	—19 4 50,14	14,458	,8035	+9,3726	,1601	,8405	13	+,011	+ ,06
650	3	+ 4 29 41,06	14,479	,5786	—8,7518	,1607	,8398	15	+,019	— ,09
651	3	+25 41 13,17	14,487	+8,9638	—9,4956	—1,1610	—9,8395	12	+,015	— ,01
652	4	—14 44 56,82	14,502	9,7752	+9,2653	,1614	,8390	16	+,009	— ,01
653	4	—14 1 9,97	14,567	9,7686	+9,2456	,1634	,8369	21	+,007	+ ,05
654	4	— 3 51 47,95	14,583	9,6803	+8,6889	,1638	,8363	22	+,014	— ,02
655	4	—37 56 28,71	14,607	9,8825	+9,6514	,1646	,8356	26	+,014	+ ,02
656	4	+19 29 20,79	14,627	+9,2577	—9,3863	—1,1651	—9,8349	25	+,001	— ,02
657	4	— 8 3 47,16	14,643	9,7210	+9,0108	,1656	,8343	27	—,001	+ ,07
658	1	—36 56 59,11	14,747	9,8774	+9,6457	,1687	,8308	44	+,015	,00
659	4	—13 53 29,41	14,750	9,7664	+9,2479	,1688	,8306	39	+,016	+ ,04
660	4	+27 51 9,29	14,817	8,8388	—9,5382	,1707	,8283	45	—,011	— ,02
661	4	+ 5 54 19,27	14,860	+9,5599	—8,8808	—1,1720	—9,8268	49	+,012	— ,01
662	4	—15 8 41,30	14,897	,7738	+9,2887	,1730	,8255	52	+,017	+ ,17
663	4	+ 0 52 23,41	14,918	,6274	—8,0515	,1737	,8247	54	+,015	,00
664	4	— 8 55 3,37	14,927	,7261	+9,0623	,1739	,8244	56	+,013	+ ,03
665	4	+13 48 24,11	14,927	,4183	—9,2494	,1739	,8244	55	+,018	— ,06
666	2	—14 55 19,84	14,973	+9,7716	+9,2840	—1,1753	—9,8227	59	+,022	— ,26
667		+ 4 12	15,006	+ ,5865	—8,7407	,1780	,8193	64	+,010	
668	4	— 4 39 46,03	15,123	+ ,6866	+8,7881	,1796	,8171	71	—,006	— ,04
669	4	+48 28 35,68	15,142	— ,3053	— 9,7523	,1802	,8164	70	—,002	— ,02
670	4	+ 4 59 13,07	15,182	+ ,5740	—8,8168	,1814	,8147	76	+,004	— ,08
671	4	— 5 42 3,73	15,213	+9,6964	+8,8773	—1,1823	—9,8136	80	+,009	— ,09
672	4	+17 24 17,03	15,226	+ ,3424	—9,3559	,1826	,8131	79	+,017	+ ,08
673	4	+63 46 22,45	15,287	— ,5888	—9,8352	,1843	,8108	82	+,055	— ,01
674	2	— 2 2 15,93	15,413	+ ,6599	+8,4395	,1879	,8056	95	+,021	— ,05
675	3	— 4 56 52,16	15,518	+ ,6875	+8,8248	,1908	,8014	102	+,012	— ,16

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	*s.*				
676	Leonis	5	4	9 23 41,26	+3,536	—8,7728	+8,6815	+0,5485	—8,4595
677	Hydræ	8	4	24 12,59	3,105	,7155	,6223	,4921	7,3666
678	Sextantis	9	4	25 57,75	3,198	,7230	,6228	,5049	7,9125
679	Leo. Min	6.7	4	26 57,93	3,582	,7903	,6862	,5541	8,5131
680	———	8.9	4	29 8,52	3,556	,7888	,6763	,5510	8,4992
681	Hydræ	8.9	5	29 13,37	3,102	—8,7230	+8,6101	+0,4916	—7,3479
682	———	8	4	29 50,12	3,104	,7239	,6086	,4919	7,3750
683	Leo. Min	7	4	31 52,04	3,570	,7981	,6744	,5527	8,5223
684	Leonis	8	4	33 6,08	3,544	,7943	,6662	,5495	8,5041
685	Sextantis	9	4	34 56,40	3,114	,7314	,5961	,4933	7,4979
686	Leonis	7	4	37 2,29	3,371	—8,7641	+8,6203	+0,5278	—8,3230
687	Antl. Pneum.	8	2	37 4,86	2,753	,7665	,6227	,4398	+8,3404
688	———	7.8	4	37 28,61	2,673	,7838	,6386	,4270	+8,4393
689	Sextantis	7	3	37 55,78	3,102	,7352	,5879	,4916	—7,3778
690	———	7.8	4	38 6,02	3,101	,7354	,5874	,4915	—7,3664
691	Sextantis	8	4	40 24,98	2,980	—8,7409	+8,5837	+0,4742	+7,8003
692	Leonis	8	4	40 50,82	3,428	,7825	,6234	,5350	—8,4133
693	———	7	4	41 4,03	3,227	,7484	,5852	,5088	—8,0609
694	Sextantis	8.9	4	42 57,86	3,054	,7415	,5738	,4849	+7,0248
695	———	7	4	45 18,20	2,948	,7499	,5729	,4695	+7,9514
696	Sextantis	8	2	45 29,32	3.142	—8,7467	+8,5689	+0,4972	—7,7438
697	Leonis	8.9	4	46 14,45	3,170	,7497	,5686	,5011	—7,8879
698	Sextantis	7.8	3	47 12,21	2,935	,7538	,5688	,4676	+8,0055
699	———	7.8	4	47 14,99	3,176	,7516	,5663	,5019	—7,9179
700	Leonis	8.9	4	48 59,95	3,490	,8128	,6201	,5428	—8,5157
701	Sextantis *pre.*	7.8	4	49 23,26	3,053	—8,7495	+8,5554	+0,4847	+7,0675
702	——— *seq.*	8	4	49 28,06	3,053	,7496	,5552	,4847	+7,0646
703	———	7.8	4	50 14,72	3,138	,7525	,5548	,4966	—7,7393
704	———	7.8	4	52 41,28	3,038	,7538	,5457	,4826	+7,3788
705	Hydræ	7.8	4	54 36,46	2,914	,7661	,5500	,4645	+8,1025
706	Leonis	8	4	54 49,76	3,198	—8,7635	+8,5462	+0,5049	—8,0309
707	Sextantis	7.8	4	55 6,81	3,125	8,7577	,5393	,4948	7,6758
708	Ursæ Maj·	8	4	55 46,18	4,104	9,0144	,7929	,6132	8,9352
709	Sextantis	8	3	58 0,40	3,118	8,7606	,5299	,4939	7 6305
710	Leonis	8	4	10 2 48,89	3,216	8,7756	,5238	,5073	8,1216
711	Urs. Min.	8	2	9 29,30	4,740	—9,2317	+8,9491	+0,6758	—9,2039
712	Leo. Min.	7.8	4	9 38,15	3,215	8,7847	8,5011	0,5072	—8,1492
713	Camelop.	8	4	10 9,99	10,371	9,8518	9,5631	1,0158	—9,8503
714	Leonis	8	4	10 54,00	3,306	8,8033	8,5148	0,5193	—8,3616
715	Ant. Pneum.	8.9	2	11 36,23	2,743	8,8283	8,5364	0,4382	+8,5023
716	Leonis	8.9	4	13 34,98	3,266	—8,7980	+8,4970	+0,5140	—8,2953
717	Antl. Pneum.	8	3	14 50,81	2,744	,8338	,5267	,4384	+8,5159
718	Hydræ	*neb.*	4	16 52,94	2,882	,7999	,4830	,4597	+8,2860
719	Sextantis	8.9	4	19 37,12	3,049	,7812	,4509	,4842	+7,3018
720	Antl. Pneum.	9	4	22 2,89	2,714	,8575	,5152	,4336	+8,5887

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s.	″
676	5	+29 5 26,00	—15,573	+8,8751	—9,5871	—1,1924	—9,7990	109	—,004	— ,01
677	3	+ 2 35 12,75	15,599	9,6085	8,5422	,1931	,7979	114	+,014	,00
678	4	+ 8 54 46,76	15,698	9,5224	9,0834	,1958	,7937	119	+,007	— ,02
679	4	+31 53 34,92	15,751	8,6128	9,6181	,1973	,7913	124	+,002	— ,02
680	4	+30 53 13,85	15,866	8,7634	9,6088	,2005	,7860	131	+,027	— ,01
681	4	+ 2 25 41,39	15,872	+9,6107	—8,5236	—1,2007	—9,7858	134	+,007	+ ,04
682	3	+ 2 34 22,10	15,905	9,6096	8,5507	,2015	,7843	138	—,007	+ ,05
683	4	+32 1 11,30	16,017	8,6902	9,6268	,2046	,7790	145	+,005	+ ,11
684	4	+30 51 19,04	16,078	8,8261	9,6140	,2062	,7761	155	—,001	+ ,05
685	4	+ 3 22 26,35	16,171	9,6010	8,6734	,2087	,7715	161	+,004	+ ,08
686	4	+21 14 30,95	16,280	+9,2856	—9,4686	—1,2117	—9,7659	165	+,018	+ ,06
687	3	—22 0 6,89	16,280	,7924	+9,4836	,2117	,7659	167	—,018	— ,01
688	3	—26 52 42,35	16,298	,8129	+9,5657	,2121	,7650	170	+,015	,00
689	4	+ 2 32 27,34	16,324	,6117	—8,5534	,2128	,7636	171	+,004	— ,03
690	4	+ 2 28 22,01	16,336	,6117	—8,5420	,2131	,7631	172	+,015	— ,01
691	4	— 6 33 34,95	16,449	+9,6964	+8,9735	—1,2161	—9,7570	180	+,021	+ ,02
692	4	+25 19 12,21	16,472	,1732	—9,5456	,2167	,7557	183	+,010	— ,02
693	4	+11 52 13,26	16,485	,4885	—9,2276	,2171	,7550	184	+,010	— ,09
694	4	— 1 5 21,14	16,578	,6474	+8,2008	,2195	,7498	192	+,003	— ,05
695	4	— 9 8 2,62	16,688	,7126	+9,1219	,2224	,7434	203	+,018	+ ,02
696		+ 5 43	16,698	+9,5763	—8,9177	—1,2227	—9,7428	204	+,008	
697	4	+ 7 56 34,24	16,736	,5490	—9,0598	,2237	,7405	206	+,017	— ,14
698	4	—10 15 45,08	16,781	,7202	+9,1745	,2248	,7378	210	+,025	— ,07
699	4	+ 8 27 8,53	16,784	,5428	—9,0892	,2249	,7377	208	+,013	,00
700	4	+30 18 44,70	16,870	,0128	—9,6280	,2271	,7324	214	+,017	— ,18
701	3	— 1 9 50,84	16,885	+9,6474	+8,2405	—1,2275	—9,7314	219	+,008	+ ,03
702	4	— 1 10 4,47	16,889	,6474	+8,2406	,2276	,7312	220	+,010	— ,01
703	4	+ 5 35 23,42	16,926	,5798	—8,9134	,2286	,7288	222	+,011	— ,05
704	4	— 2 24 17,09	17,041	,6590	+8,5545	,2315	,7214	228	+,012	— ,01
705	4	—12 30 31,08	17,126	,7300	+9,2682	,2337	,7156	232	+,004	+ ,07
706	4	+10 41 20,69	17,119	+9,5185	—9,1994	—1,2340	—9,7148	234	+,010	— ,05
707	4	+ 4 45 32,89	17,150	+ ,5899	8,8504	,2343	,7139	235	+,012	— ,14
708	4	+56 27 9,11	17,183	— ,2765	9,8539	,2351	,7116	236	+,004	+ ,02
709	4	+ 4 16 20,90	17,278	+ ,5966	8,8054	,2375	,7048	243	—,001	— ,18
710	4	+12 50 30,71	17,488	+ ,4983	9,2868	,2427	,6890	4	+,017	— ,07
711	2	+69 44 44,48	17,770	—9,4533	—9,9199	—1,2497	—9,6651	30	+,007	— ,10
712	4	+13 26 25,43	17,770	+ ,4983	— ,3133	,2497	,6651	34	+,010	— ,10
713	4	+85 13 44,30	17,824	— ,6228	— ,9475	,2510	,6602	14	—,016	— ,02
714	3	+21 13 31,79	17,821	+ ,3802	— ,5072	,2509	,6605	37	+,007	+ ,07
715	3	—28 8 22,75	17,851	+ ,7767	+ ,6237	,2517	,6578	43	+,011	+ ,08
716	4	+18 20 25,21	17,928	+9,4330	—9,4488	—1,2535	—9,6505	50	+,011	— ,10
717	3	—28 43 55,36	17,977	,7730	+9,6349	,2547	,6457	56	+,012	+ ,16
718	4	—17 48 46,15	18,056	,7372	+9,4407	,2566	,6377	68	+,038	— ,07
719	4	— 1 52 45,52	18,158	,6513	+8,4776	,2591	,6268	81	+,012	— ,10
720	4	—32 34 13,81	18,246	,7701	+9,6904	,2612	,6169	92	+,028	+ ,04

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Precession.	Logarithms of a	b	c	d
				h. m. s.	s.				
721	Ursæ Maj.	8	4	10 22 28,51	+3,837	—9,0187	+8,6737	+0,5840	—8,9290
722	———	8	4	23 42,44	3,715	8,9765	,6254	,5701	—8,8608
723	Hydræ	8	3	24 38,07	2,842	,8206	,4648	,4536	+8,4087
724	52 Navis	6.7	4	24 58,27	2,545	,9304	,5731	,4057	+8,7740
725	Antl. Pneum.	8	4	25 22,19	2,726	,8601	,5008	,4355	+8,5909
726	Antl. Pneum.	8	4	27 11,54	2,727	—8,8635	+8,4945	+0,4357	+8,5989
727	———	8.9	4	29 1,27	2,807	,8383	,4598	,4482	+8,4926
728	Hydræ	8	4	31 9,65	2,916	,8093	,4194	,4648	+8,2686
729	Leonis	9	4	32 53,66	3,197	,8066	,4071	,5047	—8,2143
730	Sextantis	8	4	34 39,35	3,115	,7952	,3858	,4935	—7,7768
731	Leo. Min.	8	4	36 45,98	3,358	—8,8638	+8,4427	+0,5261	—8,5815
732	Antl. Pneum.	8	4	37 22,57	2,809	,8527	,4281	,4485	+8,5362
733	Hydræ	8	4	38 55,05	2,945	,8112	,3776	,4691	+8,2213
734	Sextantis	8	4	42 0,86	3,004	,8028	,3507	,4777	+7,9544
735	Hyd. & Crat.	7	4	42 44,02	3,006	,8032	,3467	,4780	+7,9485
736	Sextantis	8	4	43 25,43	3,006	—8,8036	+8,3430	+0,4780	+7,9480
737	Leonis	8.9	4	43 37,76	3,132	,8040	,3422	,4958	—7,9643
738	Ursæ Maj.	7	4	46 51,47	3,456	,9365	,4542	,5386	—8,7692
739	Leonis	8.9	4	47 24,28	3,130	,8067	,3210	,4955	—7,9781
740	———	8	4	49 53,12	3,233	,8373	,3356	,5096	—8,4177
741	Leonis	8	4	50 58,84	3,143	—8,8118	+8,3025	+0,4973	—8,0838
742	———	8.9	4	52 45,63	3,178	,8220	,3005	,5021	8,2592
743	———	7.8	4	53 59,95	3,135	,8124	,2827	,4962	8,0535
744	———	8	4	54 9,28	3,073	,8059	,2751	,4876	6,9323
745	Ursæ Maj.	8	4	55 35,79	3,368	,9169	,3753	,5274	8,7169
746	Leonis	8	3	55 37,52	3,073	—8,8067	+8,2656	+0,4876	—6,9694
747	———	7.8	4	55 56,46	3,156	,8190	,2756	,4991	8,1883
748	———	8	1	58 4,71	3,118	,8120	,2560	,4939	7,9555
749	———	7.8	4	58 39,39	3,137	,8164	,2530	,4965	8,1003
750	Ursæ Maj.	7.8	3	59 22,59	3,565	9,0502	,4813	,5523	8,9637
751	Leonis	7	4	59 54,68	3,062	—8,8090	+8,2360	+0,4860	+7,0651
752	———	7	4	11 0 0,69	3,181	,8309	,2575	,5026	—8,3229
753	Leo. Min.	7	4	3 14,05	3,323	,9126	,3137	,5215	—8,6997
754	Leonis	8.9	5	5 55,92	3,077	,8120	,1912	,4481	—7,3010
755	———	8	3	6 7,77	3,143	,8241	,2016	,4973	—8,1922
756	Ursæ Maj.	7.8	3	9 4,70	3,300	—8,9052	+8,2911	+0,5185	—8,6777
757	Leonis	7	4	9 47,63	3,134	,8245	,1703	,4961	—8,1716
758	Crateris	8	3	10 26,23	3,037	,8162	,1559	,4824	+7,8378
759	———	8	4	11 26,02	3,038	,8166	,1472	,4826	+7,8382
760	Leonis	8	4	13 2,57	3,091	,8163	,1325	,4901	—7,7404
761	Leonis	7.8	4	14 37,21	3,091	—8,8171	+8,1177	+0,4901	—7,7588
762	Hydræ	8	3	14 53,75	2,883	8,9041	,2021	,4598	+8,6666
763	Ursæ Maj.	7	4	15 26,96	3,369	9,0030	,2951	,5275	—8,8840
764	Hydræ	7	4	15 51,61	2,888	8,9036	,1923	,4606	+8,6646
765	Leonis	8	2	17 14,70	3,096	8,8193	,0935	,4908	—7,8819

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of *a′*	*b′*	*c′*	*d′*	Piazzi No.	Annual P. M. A.R.	Decn.
		° ′ ″	″						s.	″
721	4	+54 25 35,81	—18,265	—8,9445	—9,8699	—1,2616	—9,6147	88	+,011	—0,10
722	5	+50 1 14,71	18,309	—8,5185	—9,8449	,2626	,6096	96	+,027	— ,07
723	3	—22 45 32,96	18,341	+9,7451	+9,5494	,2634	,6056	103	+,007	+ ,04
724	4	—44 13 29,33	18,350	,7723	+9,8053	,2636	,6045	107	—,004	— ,10
725	3	—32 31 33,32	18,365	,7642	+9,6928	,2640	,6027	108	+,022	+ ,06
726	4	—32 55 8,09	18,429	+9,7619	+9,6989	—1,2655	—9,5945	115	+,020	+ ,08
727	4	—26 48 29,59	18,490	,7490	+9,6193	,2669	,5865	120	+,019	,00
728	4	—16 43 31,34	18,561	,7202	+9,4259	,2686	,5767	130	+,016	— ,01
729	4	+14 49 54,01	18,619	,5119	—9,3758	,2699	,5685	132	+,020	— ,16
730	4	+ 5 31 25,16	18,675	,5988	— 8,9509	,2713	,5599	140	+,026	— ,18
731	2	+31 29 19,37	18,741	+9,2672	—9,6885	—1,2728	—9,5497	146	+,020	— ,01
732	4	—28 49 24,41	18,760	,7404	+9,6548	,2732	,5467	151	+,017	+ ,08
733	4	—14 52 14,19	18,807	,7059	+9,3825	,2743	,5389	156	+,020	— ,22
734	3	— 8 7 25,46	18,900	,6785	+9,1260	,2764	,5224	168	+,029	— ,07
735	4	— 8 1	18,921	,6776	+9,1203	,2769	,5185	174	+,011	
736	4	— 7 59 49,14	18,940	+9,6776	+9,1199	—1,2774	—9,5148	178	+,021	+ ,01
737	3	+ 8 19 52,53	18,946	,5821	—9,1358	,2775	,5137	179	+,013	— ,15
738	4	+42 53 6,50	19,038	,0212	—9,8103	,2796	,4954	191	+,009	— ,08
739	3	+ 8 33 10,80	19,051	,5832	—9,1493	,2799	,4923	195	+,017	— ,11
740	4	+22 23 8,43	19,118	,4579	—9,5598	,2814	,4777	201	+,030	— ,03
741	4	+10 48 29,25	19,147	+9,5694	—9,2522	—1,2821	—9,4709	204	+,008	— ,06
742	5	+15 54 14,61	19,192	,5289	9,4184	,2831	,4597	213	+,008	— ,29
743	4	+10 3 8,36	19,223	,5775	9,2229	,2838	,4521	220	+,008	— ,16
744	4	+ 0 47 9,28	19,226	,6335	8,1084	,2839	,4512	221	+,017	— ,09
745	3	+39 7 43,06	19,262	,2122	9,7827	,2847	,4412	228	—,001	— ,01
746	4	+ 0 51 6,15	19,261	+9,6335	—8,1454	—1,2847	—9,4417	230	+,011	— ,08
747	4	+13 32 59,92	19,270	,5539	9,3521	,2849	,4394	231	+,002	— ,03
748	3	+ 8 1 19,14	19,311	,5944	9,1274	,2858	,4278	239	+,008	+ ,03
749	4	+11 5 54,38	19,334	,5740	9,2682	,2863	,4209	244	+,016	— ,06
750	4	+55 2 12,87	19,352	8,5563	9,8982	,2867	,4158	246	+,009	— ,28
751	4	— 1 0 59,40	19,363	+9,6425	+8,2411	—1,2870	—9,4120	250	+,031	— ,06
752	4	+18 5 41,90	19,364	,5224	—9,4770	,2870	,4116	251	+,011	— ,11
753	5	+37 46 53,61	19,437	,2856	—9,7737	,2886	,3877	5	—,006	— ,17
754	4	+ 1 46 47,94	19,492	,6304	—8,4768	,2899	,3671	15	+,019	+ ,01
755	1	+13 30 50,84	19,497	,5658	—9,3562	,2899	,3655	17	+,011	— ,08
756	4	+36 20 18,46	19,476	+9,3222	—9,7600	—1,2895	—9,3734	26	+,016	— ,05
757	4	+12 52 52,38	19,569	,5740	—9,3367	,2915	,3353	31	+,015	— ,15
758	3	— 6 0 49,89	19,581	,6571	+9,0115	,2918	,3296	35	+,004	— ,12
759	6	— 6 0 9,30	19,599	,6571	+9,0119	,2922	,3208	39	+,003	— ,08
760	4	+ 4 50 1,70	19,627	,6180	— 8,9150	,2928	,3070	45	+,006	— ,08
761	4	+ 5 2 1,65	19,655	+9,6180	—8,9332	—1,2935	—9,2921	47	+,012	— ,18
762	5	—35 20 39,58	19,665	,6693	+9,7541	,2937	,2896	51	—,001	— ,19
763	4	+49 30 16,22	19,670	,1335	—9,8727	,2938	,2838	52	—,001	— ,11
764	4	—35 11 26,11	19,675	,6674	+9,7529	,2939	,2806	57	+,015	— ,18
765	3	+ 6 38 57,84	19,698	,6128	—9,0551	,2944	,2667	66	+,014	— ,11

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	s.				
766	Leonis	8	4	11 22 30,50	+3,046	—8,8240	+8,0345	+0,4837	+7,8275
767	17 Hydræ	6.7	4	24 9,19	2,956	,8742	8,0698	,4707	8,5513
768	———	8	4	24 22,98	2,948	,8815	8,0754	,4695	8,5816
769	Crateris	8	4	25 17,51	3,048	,8211	8,0016	,4840	7,8143
770	———	7.8	3	26 1,26	3,052	,8206	7,9925	,4846	7,7295
771	Hydræ	9	4	27 43,54	2,943	—8,9006	+8,0493	+0,4688	+8,6470
772	———	7	4	30 13,97	2,957	,8953	8,0088	,4708	+8,6281
773	Ursæ Maj.	7.8	3	33 2,69	3,206	,9508	8,0196	,5060	—8,7774
774	Crateris	8	4	33 34,42	3,007	,8532	7,9132	,4781	+8,4224
775	Hydræ	7.8	4	33 37,61	2,974	,8908	7,9508	,4733	+8,6101
776	Leonis	9	2	38 22,07	3,103	—8,8389	+7,8104	+0,4918	—8,2762
777	Ursæ Maj.	8	4	41 59,71	3,171	,9697	,8608	,5012	—8,8158
778	Leonis	8	4	44 3,06	3,096	,8417	,6790	,4908	—8,3014
779	Virginis	8	4	45 4,42	3,067	,8236	,6323	,4867	+7,5424
780	Leonis	8	4	45 25,57	3,090	,8379	,6367	,4900	—8,2486
781	Virginis	7	4	45 39,99	3,076	—8,8253	+7,6159	+0,4880	—7,8273
782	———	7	4	46 26,91	3,068	,8232	,5884	,4869	+6,8054
783	65 Ursæ Maj.	7.8	4	46 32,47	3,151	,9924	,7533	,4984	—8,8591
784	Leonis	9.10	4	46 56,64	3,089	,8404	,6901	,4898	—8,2807
785	Virginis	8	4	47 0,72	3,070	,8235	,5710	,4871	—7,3627
786	Leonis	7.8	3	47 46,35	3,089	—8,8418	+7,5636	+0,4898	—8,2981
787	Virginis	7.8	4	48 29,00	3,081	,8321	,5266	,4887	8,1286
788	Leonis	9.10	3	49 13,27	3,087	,8436	,5090	,4895	8,3173
789	Virginis	7	3	49 21,10	3,076	,8276	,4875	,4880	7,9639
790	———	8.9	3	50 6,27	3,073	,8253	,4507	,4876	7,7854
791	Ursæ Maj.	8.9	4	52 11,19	3,146	—9,1280	+7,6488	+0,4978	—9,0666
792	Virginis	8	3	53 4,32	3,073	8,8274	7,2955	,4876	—7,9372
793	Corvi	8	4	55 53,49	3,060	,8513	7,0859	,4857	+8,3884
794	Leonis	8	4	57 2,46	3,073	,8461	6,9227	,4876	—8,3404
795	Hydræ	7.8	3	59 53,89	3,068	,9042	—5,6690	,4869	+8,6493
796	Ursæ Maj.	8.9	4	12 0 6,96	3,070	—9,0146	—6,1773	+0,4871	—8,8980
797	Corvi	7.8	4	5 10,24	3,080	8,8529	7,2252	,4885	+8,4023
798	Virginis	7	3	5 51,62	3,071	,8253	,2482	,4873	+7,7509
799	———	9.10	4	7 21,07	3,059	,8329	,3498	,4856	—8,1417
800	———	8	4	9 17,08	3,053	,8393	,4555	,4847	—8,2616
801	*1 Virginis	7	5	9 44,74	3,071	—8,8241	—7,4613	+0,4873	+7,5525
802	Comæ Ber.	8	4	9 45,08	3,048	,8487	,4859	,4840	—8,3686
803	———	9	4	14 40,88	3,041	,8427	,6553	,4830	—8,3119
804	Virginis	7.8	4	16 10,39	3,060	,8246	,6800	,4857	—7,7833
805	———	8	3	16 18,02	3,058	,8251	,6840	,4854	—7,8395
806	Virginis	7.8	3	17 33,04	3,059	—8,8243	—7,7138	+0,4856	—7,7718
807	Centauri	8	3	18 44,63	3,137	,8935	,8115	,4965	+8,6162
808	Virginis	9	4	19 17,83	3,057	,8242	,7544	,4853	—7,7897
809	———	8	4	19 22,85	3,071	,8225	,7541	,4873	+7,2355
810	———	8.9	4	19 53,94	3,033	,8405	,7853	,4819	—8,2938

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	Logarithms of b′	Logarithms of c′	Logarithms of d′	Piazzi No.	Annual P. M. A. R.	Annual P. M. Decn.
		° ′ ″	″						s	″
766	4	— 5 48 55,68	—19,779	+9,6513	+9,0013	—1,2962	—9,2092	91	+,021	—0,06
767	4	—28 21 51,31	19,801	,6590	,6717	,2967	,1903	95	+,002	+ ,17
768	4	—30 4 6,57	19,802	,6551	,6948	,2967	,1887	97	+,013	— ,19
769	4	— 5 37 56,65	19,817	,6503	8,9883	,2970	,1756	104	+,008	— ,17
770	3	— 4 37 22,27	19,826	,6484	,9041	,2972	,1672	108	+,011	— ,11
771	4	—33 52 47,08	19,847	+9,6415	+9,7422	—1,2977	—9,1444	112	+,023	,00
772	4	—32 41 51,28	19,877	,6385	+ ,7291	,2983	,1099	127	+,012	— ,02
773	4	+42 8 53,89	19,907	,3874	— ,8237	,2990	,0659	137	+,051	— ,07
774	4	—21 44 37,22	19,913	,6484	+ ,5663	,2991	,0572	142	+,005	— ,06
775		—31 34	19,913	,6335	+ ,7165	,2991	,0572	143	+,015	
776	4	+15 54 45,01	19,957	+9,5933	—9,4353	—1,3001	—8,9696	155	—,003	,00
777	4	+44 34 15,58	19,982	,4065	—9,8447	,3007	,8898	165	+,026	— ,10
778	4	+16 45 50,49	19,996	,5977	—9,4587	,3009	,8363	169	+,012	— ,07
779	4	— 2 58 15,36	20,002	,6365	+8,7179	,3011	,8078	173	+,009	— ,04
780	4	+14 56 28,42	20,004	,6064	—9,4098	,3011	,7979	177	+,007	— ,17
781	3	+ 5 47 26,33	20,005	+9,6345	—9,0012	—1,3011	—8,7898	180	+,018	— ,09
782	4	— 0 31 33,81	20,009	,6385	+7,9815	,3012	,7645	182	+,015	— ,47
783	1	+47 23 22,81	20,010	,4014	—9,8660	,3012	,7601	183	+,016	,00
784	3	+16 1 26,63	20,011	,6042	—9,4396	,3013	,7490	186	+,022	— ,07
785	3	+ 2 0 39,83	20,012	,6375	—8,5385	,3013	,7468	187	+,018	— ,04
786	3	+16 38 38,71	20,015	+9,6031	—9,4557	—1,3014	—8,7212	194	+,021	— ,06
787	4	+11 26 30,09	20,019	,6191	,2960	,3014	,6940	197	+,006	— ,02
788	4	+17 20 39,71	20,021	,6021	,4732	,3015	,6650	198	+,025	— ,01
789	4	+ 7 53 23,50	20,022	,6274	,1358	,3016	,6595	201	+,021	— ,14
790	4	+ 5 15 17,53	20,026	,6314	8,9597	,3017	,6250	205	+,002	— ,23
791	4	+60 15 53,62	20,032	+9,2695	—9,9384	—1,3019	—8,5205	210	+,018	— ,12
792	4	+ 7 25 9,72	20,036	,6294	— ,1097	,3019	,4680	215	+,016	— ,01
793	4	—20 7 33,69	20,040	,6159	+ ,5371	,3019	,2346	225	+,005	— ,19
794	4	+18 12 16,98	20,041	,6107	— ,4942	,3019	,0765	229	+,006	— ,11
795	4	—33 45 38,73	20,043	,5575	+ ,7451	,3020	+6,7648	240	—,006	+ ,13
796	4	+49 52 48,87	20,043	+9,4456	—9,8834	—1,3020	+7,1627	242	,000	— ,25
797	4	—20 43 21,41	20,038	,5999	+9,5492	,3018	8,3722	14	+,023	— ,11
798	4	— 4 48 36,73	20,037	,6345	+8,9255	,3018	,4227	17	—,004	— ,01
799	4	+11 46 49,73	20,035	,6355	—9,3086	,3017	,5167	23	+,009	+ ,04
800	4	+15 21 19,08	20,027	,6325	—9,4219	,3016	,6159	30	+,003	— ,16
801	4	— 3 2 33,22	20,025	+9,6355	+8,7279	—1,3016	+8,6368	32	+,007	+ ,05
802	3	+19 20 49,26	20,025	,6263	—9,5195	,3016	,6368	34	+,011	— ,08
803	4	+17 9 19,59	20,001	,6375	9,4683	,3011	,8117	62	+,014	— ,07
804	4	+ 5 14 26,64	19,994	,6425	8,9575	,3008	,8543	72	+,014	— ,22
805	3	+ 5 57 26,29	19,991	,6425	9,0133	,3008	,8578	73	+,013	— ,31
806	4	+ 5 6 27,82	19,983	+9,6425	—8,9461	—1,3007	+8,8882	77	+,004	— ,20
807	2	—31 52 4,46	19,975	,5366	+9,7213	,3005	,9165	82	—,005	,00
808		+ 5 19	19,971	,6434	—8,9639	,3004	,9286	86	+,015	
809	1	— 1 28 9,48	19,971	,6365	+8,4115	,3004	,9301	89	+,002	— ,25
810	4	+16 31 36,39	19,966	,6444	—9,4517	,3003	,9432	94	+,010	+ ,04

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan 1, 1836.	Annual Preces-sion.	Logarithms of a	Logarithms of b	Logarithms of c	Logarithms of d
				h. m. s.	"				
811	Comæ Ber.	8	4	12 20 32,78	+3,007	—8,8714	—7,8291	+0,4781	—8,5252
812	Corvi	6	4	21 43,62	3,122	,8573	,8396	,4944	+8,4459
813	Virginis	7.8	2	23 20,41	3,041	,8299	,8429	,4830	—8,1163
814	———	8	4	23 22,31	3,037	,8329	,8472	,4824	—8,1855
815	Corvi	8	2	25 12,44	3,130	,8560	,9025	,4955	+8,4413
816	Can. Ven.	7	4	25 42,45	2,965	—8,9039	—7,9595	+0,4720	—8,6545
817	1 Comæ Ber.	7.8	4	26 52,72	3,013	,8459	,9202	,4790	—8,3644
818	Corvi	8	4	28 1,14	3,114	,8567	,9290	,4933	+8,2636
819	Virginis	9	4	28 46,98	3,022	,8357	,9403	,4803	—8,2525
820	———	6	1	30 55,13	3,090	,8233	,9590	,4900	+7,9183
821	Virginis	7.8	4	32 28,62	3,022	—8,8319	—7,9861	+0,4803	—8,2032
822	Can. Ven.	7	4	34 30,29	2,854	,9831	8,1662	,4554	—8,8455
823	Comæ Ber.	7.8	3	34 35,75	2,955	,8780	,0628	,4706	—8,5668
824	Virginis	8.9	3	35 10,69	3,055	,8195	,0118	,4850	—7,6052
825	———	7.8	5	35 46,58	3,075	,8188	,0185	,4878	+7,3543
826	Virginis	8.9	4	38 8,79	3,068	—8,8178	—8,0153	+0,4869	—5,7587
827	———	8	4	38 16,62	3,068	,8178	,0468	,4869	—6,3954
828	Comæ Ber. *pre.*	8	2	43 47,65	2,975	,8430	,1316	,4735	—8,3777
829	———	10	4	43 55,92	2,970	,8458	,1358	,4728	—8,4007
830	Can. Ven.	10	4	44 46,98	2,782	,9870	,2857	,4444	—8,8557
831	Virginis	9.10	4	45 57,15	3,100	—8,8180	—8,1284	+0,4914	+7,8871
832	———	7.8	3	47 17,31	3,008	,8247	,1472	,4783	—8,1561
833	———	8.9	4	47 17,52	3,002	,8268	,1493	,4774	—8,1961
834	———	7.8	4	48 27,22	3,178	,8448	,1784	,5021	+8,4050
835	Centauri	8	3	49 55,90	3,253	,8876	,2345	,5123	+8,6182
836	Virginis	7	4	53 8,63	3,055	—8,8124	—8,1872	+0,4850	—7,4313
837	Centauri	8	4	54 1,38	3,276	,8902	,2722	,5153	+8,6313
838	Comæ Ber.	7	4	55 3,56	2,926	,8515	,2414	,4663	—8,4608
839	Virginis	9	3	55 47,53	3,034	,8132	,2100	,4820	—7,8361
840	———	7.8	4	55 47,79	2,999	,8206	,2176	,4770	—8,1420
841	Virginis	8	4	56 22,48	3,062	—8,8106	—8,2122	+0,4860	—7,1132
842	———	9	4	56 49,96	3,110	8,8138	,2191	,4928	+7,9169
843	Ursæ Maj.	8	4	57 16,34	2,598	9,0495	,4580	,4146	—8,9619
844	Virginis	8.9	4	57 25,79	3,038	8,8116	,2217	,4826	—7,7476
845	———	9	3	57 54,91	3,040	8,8113	,2250	,4829	—7,7354
846	Centauri	7.8	3	57 56,35	3 288	—8,8874	—8,3011	+0,5169	+8,6264
847	Virginis	8.9	4	58 42,24	3 099	8,8112	,2306	,4912	+7,7699
848	Ursæ Maj.	8	3	59 33,89	2,519	9,0834	,5094	,4012	—9,0112
849	Virginis		4	13 0 20,07	3,146	8,8191	,2512	,4978	+8,1573
850	Comæ Ber.		3	1 27,89	2,950	8,8307	,2707	,4698	—8,3288
851	Can. Ven.	8	3	3 36,78	2,879	—8 8579	—8,3141	+0,4592	—8,6187
852	Virginis		5	4 44,07	3,152	8,8169	,2810	,4986	+8,1562
853	Ursæ Maj.	6.7	3	5 50,04	2,569	9,0237	,4953	,4098	—8,9246
854	Virginis *pre.*	7	4	6 21,62	3,139	8,8126	,2884	,4968	+8,0733
855	——— *seq.*	8	4	6 24,38	3,139	8,8126	,2884	,4968	+8,0733

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a′	Logarithms of b′	Logarithms of c′	Logarithms of d′	Piazzi No.	Annual P. M. A. R.	Annual P. M. Decn.
		° ′ ″	″						s.	″
811	2	+26 48 32,74	−19,961	+9,6314	−9,6520	−1,3002	+8,9559	96	+,014	+0,04
812	3	−22 47 16,84	19,952	,5199	+ ,5866	,3000	8,9803	105	+,015	− ,03
813	2	+11 10 47,04	19,942	,6484	− ,2841	,2997	9,0107	113	−,007	,00
814	3	+13 2 4,43	19,937	,6484	− ,3503	,2997	,0120	114	+,021	− ,16
815	3	−22 36 13,20	19,920	,5539	+ ,5826	,2993	,0437	117	+,024	− ,07
816	4	+34 17 23,50	19,915	+9,6263	−9,7477	−1,2992	+9,0527	124	−,003	− ,16
817	4	+19 16 50,58	19,904	,6522	− ,5154	,2989	,0712	132	+,012	− ,13
818	4	−15 28 52,02	19,892	,5866	+ ,4236	,2987	,0890	134	+,019	− ,12
819	4	+15 9 21,27	19,883	,6551	− ,4133	,2985	,1011	138	−,011	− ,10
820	4	− 7 7 39,86	19,859	,6170	+ ,0910	,2979	,1317	147	+,011	− ,16
821	4	+13 37 3,80	19,843	+9,6580	−9,3679	−1,2976	+9,1498	154		− ,09
822	4	+46 46 42,58	19,815	,6096	−9,8573	,2970	,1781	164	+,006	+ ,08
823	4	+29 15 42,54	19,814	,6561	−9,6037	,2969	,1797	165	+,011	− ,19
824	3	+ 3 31 14,43	19,805	,6454	−8,7805	,2968	,1871	167	+,013	− ,03
825	4	− 1 56 33,09	19,796	,6325	+8,5301	,2966	,1943	170	+,008	− ,03
826	4	+ 0 4 30,95	19,764	+9,6375	−6,9347	−1,2959	+9,2214	174	+,024	− ,15
827	4	+ 0 14 3,20	19,762	,6375	7,5715	,2958	,2229	176	+,014	− ,16
828	6	+20 3 35,53	19,675	,6748	9,5267	,2939	,2806	201	+,036	− ,17
829	4	+21 3 52,04	19,674	,6758	9,5469	,2939	,2819	203	+,027	− ,17
830	4	+47 40 7,59	19,658	,6464	9,8602	,2935	,2902	209	+,012	− ,09
831	3	− 6 43 3,66	19,637	+9,6107	+9,0602	−1,2931	+ 9,3015	216	+,016	− ,16
832	4	+12 23 15,47	19,615	,6702	− ,3219	,2926	,3131	221	+,022	+ ,04
833	4	+13 35 33,81	19,615	,6721	− ,3609	,2926	,3131	222	+,026	− ,11
834	4	−21 16 53,56	19,594	,5159	+ ,5503	,2921	,3238	225	+,019	− ,03
835	4	−32 30 6,00	19,566	,3979	+ ,7201	,2915	,3365	233	+,011	− ,07
836	4	+ 2 24 20,68	19,504	+9,6464	−8,6071	−1,2901	+9,3629	246	+,023	− ,06
837	4	−33 24 24,98	19,486	,3674	+9,7288	,2897	,3698	247	+,015	+ ,08
838	3	+24 5 7,63	19,464	,6937	−9,5974	,2892	,3781	252	+,011	− ,02
839	4	+ 6 4 16,78	19,447	,6609	−9,0097	,2889	,3837	256	+,004	− ,01
840	4	+12 6 53,33	19,447	,6758	−9,3083	,2889	,3837	257	+,014	+ ,02
841	4	+ 1 10 57,11	19,435	+9,6429	−8,2892	−1,2886	+9,3882	258	+,007	− ,01
842	4	− 7 16 2,87	19,425	,6021	+9,0894	,2884	,3917	259	+,027	− ,13
843	4	+54 50 2,47	19,417	,6561	−9,8986	,2882	,3947	261	+,005	− ,23
844	5	+ 4 58 24,36	19,412	,6571	−8,9220	,2881	,3961	260	+,025	− ,02
845	4	+ 4 49 35,18	19,402	,6571	−8,9100	,2878	,3996	265	+,024	− ,26
846	3	−33 14 14,89	19,402	+9,3522	+9,7249	−1,2878	+9,3996	263	+,002	− ,03
847	4	− 5 12 11,55	19,386	,6117	+8,9442	,2875	,4049	271	+,005	− ,13
848	4	+57 54 14,08	19,367	,6522	−9,9129	,2870	,4111	275	+,023	− ,09
849	3	−12 33 45,96	19,348	,5647	+9,3228	,2866	,4167	277	+,002	+ ,14
850	4	+18 21 39,37	19,324	,6955	−9,4822	,2861	,4242	282	+,025	− ,07
851	4	+27 15 41,00	19,272	+9,7093	−9,6437	−1,2849	+9,4390	10	+,016	− ,05
852	4	−12 35 45,36	19,244	,5599	+ ,3216	,2843	,4465	19	+,001	− ,06
853	4	+52 46 15,28	19,218	,6893	− ,8826	,2837	,4533	24	+,003	+ ,02
854	5	−10 29 6,51	19,203	,5729	+ ,2520	,2834	,4572	25	−,002	− ,36
855	3	−10 28 42,61	19,203	,5729	+ ,2420	,2834	,4572	26	+,008	− ,17

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces- sion.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	*s.*				
856	Virginis	8	3	13 6 57,78	+3,117	—8,8084	—8,2883	+0,4937	+7,9065
857	———	8.9	3	8 18,28	3,110	8,8066	,2956	,4928	+7,8319
858	———	7.8	4	8 19,77	3,154	8,8143	,3032	,4989	+8,1433
859	Ursæ Maj.	8.9	3	8 27,41	2,382	9,1072	,5961	,3769	—9,0454
860	Virginis	8	4	9 32,54	2,964	8,8178	,3147	,4719	—8,2198
861	Virginis	8	4	10 3,07	3,107	—8,8051	—8,3056	+0,4923	+7,7801
862	———	8	4	10 20,92	3,153	,8123	,3145	,4987	8,1230
863	———	8	3	10 50,26	3,143	,8097	,3155	,4973	8,0621
864	———	8	4	10 58,73	3,152	,8116	,3182	,4986	8,1162
865	———	7.8	4	12 37,59	3,135	,8072	,3245	,4962	8,0094
866	Hydræ	6	3	12 41,80	3,209	—8,8250	—8,3427	+0,5064	+8,3298
867	Virginis	8	3	12 57,63	3,149	,8093	,3284	,4982	+8,0860
868	Comæ Ber.	8	3	13 49,29	2,925	,8242	,3487	,4661	—8,3283
869	Hydræ	8.9	3	13 58,49	3,199	,8206	,3464	,5050	+8,2910
870	Virginis	7	4	14 0,62	3,108	,8026	,3284	,4925	+7,7722
871	Ursæ Maj. *seq.*	6.7	4	17 19,76	2,417	—9,0484	—8,5944	+0,3833	—8,9658
872	Virginis	7.8	3	18 22,50	3,108	8,7996	,3523	,4925	+7,7484
873	Hydræ	8	3	19 18,68	3,248	,8287	,3870	,5116	+8,3941
874	———	7	4	19 27,68	3,275	,8377	,3968	,5152	+8,4535
875	Virginis	7	2	19 52,03	3,008	,7968	,3583	,4869	—5,5606
876	Virginis	8	4	19 52,11	3,140	—8,8021	—8,3636	+0,4969	+7,9925
877	———	7	2	20 26,57	2,931	8,8148	,3794	,4670	—8,2696
878	Hydræ	7	4	21 9,01	3,233	8,8216	,3904	,5096	+8,3447
879	Ursæ Min.	7	4	21 57,26	1,515	9,3349	,9080	,1804	—9,3160
880	Virginis	8	3	22 16,63	3,141	8,8004	,3758	,4971	+7,9883
881	Virginis	8		22	3,080	—8,7953	—8,3707	+0,4885	+7,1985
882	———	9	3	22 44,51	3,080	8,79 0	,3731	,4885	+7,1931
883	Ursæ Maj.	8	3	22 48,39	2,223	9,1059	,6840	,3469	—9,0466
884	Hydræ	8	4	22 49,98	3,291	8,8385	,4170	,5173	+8,4690
885	Vriginis	8.9	4	23 48,21	2,985	8,8004	,3846	,4749	—8,0314
886	Ursæ Min.	7	4	25 38,25	0,444	—9,5308	—9,1244	+9,6474	—9,5235
887	Virginis	8	4	26 54,73	3,104	8,7928	8,3945	0,4919	+7,6489
888	———	8	4	27 17,18	3,146	,7968	,4003	,4978	+7,9895
889	———	8	3	28 14,84	3,209	,8071	,4160	,5064	+8,2376
890	———	9	4	29 6,17	3,119	,7923	,4056	,4940	+7,7994
891	Virginis	9	4	29 30,85	3,074	—8,7898	—8,4056	+0,4877	+6,9162
892	———	8	4	30 2,69	3,093	,7899	,4082	,4904	+7,4940
893	———	8.9	4	30 10,59	3,049	,7895	,4 89	,4842	—7,3500
894	———	7.8	4	30 44,29	3,010	,7915	,4137	,4786	—7,8375
895	Bootis	7.8	4	32 50,92	2,867	,8164	,4499	,4574	—8,3675
896	Virginis	9	3	34 16,95	3,167	—8,7932	—8,4339	+0,5006	+8,0532
897	Can Ven.	9	3	34 54,61	2,769	8,8437	,4875	,4443	—8,5295
898	Virginis	7	4	35 0,82	3,101	8,7864	,4302	,4915	+7,5679
899	———	7	3	35 3,94	2,991	8,7896	,4345	,4758	—7,9394
900	Draconis	7.8	3	36 23,09	1,862	9,1687	,8200	,2700	—9,1282

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of				Piazzi No.	Annual P. M.	
				a′	b′	c′	d′		A.R.	Decn.
		° ′ ″	″						s.	″
856	3	— 7 11 17,12	—19,188	+9,5955	+9,0791	—1,2830	+9,4609	28	+,016	—0,06
857	3	— 6 3 58,53	19,154	,6031	+ ,0055	,2823	,4692	34	+,011	— ,10
858	3	—12 17 24,79	19,144	,5587	+ ,3093	,2823	,4692	33	+,018	— ,09
859	4	+60 9 43,19	19,154	,6730	— ,9185	,2823	,4692	39	—,035	— ,11
860	4	+14 37 44,15	19,123	,6946	— ,3816	,2815	,4765	43	,000	— ,14
861	4	— 5 24 2,01	19,109	+9,6064	+8,9542	—1,2812	+9,4797	46	+,012	— ,15
862	4	—11 46 56,62	19,102	,5599	9,2898	,2811	,4813	47	+,007	— ,04
863	4	—10 17 2,72	19,087	,5717	9,2311	,2807	,4845	49	+,011	— ,10
864	4	—11 37 8,05	19,084	,5599	9,2833	,2807	,4853	50	+,006	— ,06
865	4	— 9 8 17,32	19,039	,5786	9,1799	,2796	,4950	58	—,006	+ ,06
866	4	—18 37 33,81	19,038	+9,4928	+9,4825	—1,2796	+9,4954	59	,000	+ ,04
867	4	—10 53 4,85	19,031	,5647	+9,2542	,2795	,4965	60	+,012	— ,11
868	2	+18 37 40,09	19,008	,7093	—9,4811	,2789	,5015	63	+,026	+ ,04
869	4	—17 10 7,06	19,002	,5065	+9,4473	,2788	,5026	64	—,004	— ,11
870	4	— 5 20 10,88	19,002	,6042	+8,9464	,2788	,5026	67	+,005	— ,32
871	3	+55 46 49,21	18,909	+9,7143	—9,8921	—1,2767	+9,5206	79	+,050	— ,04
872	4	— 5 4 35,93	18,876	,6053	+8,9228	,2759	,5267	81	+,005	— ,12
873	3	—21 32 41,40	18,849	,4456	+9,5387	,2753	,5316	86	+,012	— ,01
874	4	—24 21 35,38	18,844	,4065	+9,5890	,2752	,5323	87	+,018	— ,02
875	3	+ 0 1 47,22	18,833	,6375	—6,4367	,2749	,5344	89	+,018	— ,52
876	4	— 8 53 28,87	18,833	+9,5752	+9,1633	—1,2749	+9,5344	88	+,019	— ,01
877	4	+16 33 38,08	18,817	,7109	—9,4268	,2745	,5372	92	+,010	— ,02
878	4	—19 27 44,01	18,794	,4669	+9,4952	,2740	,5409	97	—,010	— ,05
879	4	+73 14 41,12	18,772	,6628	—9,9526	,2735	,5447	109	+,004	— ,02
880	5	— 8 50 31,29	18,760	,5740	+9,1592	,2732	,5467	103	+,007	+ ,06
881	3	— 1 25 33,10	18,760	+9,6284	+8,3745	—1,2732	+9,5467	104		— ,11
882	4	— 1 24 50,70	18,745	,6284	+8,3691	,2729	,5490	108	+,013	— ,10
883	4	+60 46 42,95	18,745	,7168	—9,9117	,2729	,5490	113	—,008	+ ,03
884	4	—25 16 4,91	18,743	,3830	+9,6014	,2728	,5494	107	+,009	— ,11
885	4	+ 9 49 19,53	18,712	,6893	—9,2001	,2721	,5543	116	+,009	— ,09
886	4	+79 29 28,79	18,660	+9,6415	—9,9615	—1,2709	+9,5625	133	—,027	,00
887	3	— 4 5 19,18	18,612	,6085	+9,8239	,2698	,5695	129	+,024	+ ,06
888	5	— 8 56 30,72	18,601	,5694	+9,1603	,2695	,5711	132	+,016	+ ,13
889	4	—15 36 24,80	18,565	,5011	+9,3973	,2688	,5758	139	+,004	— ,16
890	4	— 5 48 52,72	18,540	,5944	+8,9732	,2681	,5795	144	+,018	— ,13
891	4	— 0 44 11,48	18,526	+9,6325	+8,0923	—1,2678	+9,5816	147	+,012	— ,28
892	5	— 2 52 1,10	18,511	,6180	+8,6695	,2674	,5837	148	+,006	+ ,12
893	3	+ 2 5 33,35	18,504	,6513	—8,5223	,2673	,5847	149	+,006	+ ,02
894	4	+ 6 24 2,60	18,486	,6758	—9,0109	,2668	,5871	153	+,020	+ ,01
895	4	+20 50 46,14	18,414	,7372	—9,5142	,2651	,5966	161	+,005	+ ,05
896	4	—10 28 19,01	18,365	+9,5490	+9,2219	—1,2640	+9,6027	166	+,001	— ,13
897	2	+29 1 59,20	18,341	,7597	—9,6473	,2635	,6053	172	+,010	— ,12
898	4	— 3 26 37,87	18,339	,6117	+8,7429	,2636	,6059	171	+,003	— ,02
899	4	+ 8 7 45,59	18,337	,6875	—9,1111	,2633	,6062	173	+,026	,00
900	4	+65 39 7,64	18,292	,7419	—9,9198	,2622	,6116	184	,000	— ,26

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a	b	c	d
				h. m. s.	s.				
901	Virginis	9	4	13 36 42,27	+3,092	—8,7843	—8,4373	+0,4902	+7,4240
902	———	7	4	36 53,89	3,180	,7926	,4469	,5024	+8,0954
903	———	7	4	38 51,92	3,126	,7843	,4483	,4950	+7,7963
904	———	8	3	38 52,29	3,084	,7822	,4462	,4891	+7,2371
905	Solitarii	7.8	4	41 57,28	3,280	,8068	,4859	,5159	+8,3446
906	k^3 Centauri	7	4	42 23,90	3,432	—8,8514	—8,5328	+0,5355	+8,5780
907	Bootis	7.8	4	42 36,28	2,834	,8117	,4940	,4524	—8,3862
908	———	7.8	3	42 39,26	2,833	,8116	,4944	,4522	—8,3865
909	Virginis	7	4	43 50,69	2,936	,7883	,4768	,4678	—8,1310
910	Bootis	8	4	43 58,98	2,913	,7921	,4812	,4643	—8,1998
911	Bootis	7.8	2	45 15,18	2,925	—8,7884	—8,4836	+0,4661	—8,1577
912	Virginis	8.9	2	46 13,49	2,980	8,7799	8,4796	,4742	—7,9411
913	———	8	5	46 40,25	2,978	8,7796	8.4814	,4739	—7,9467
914	———	8	3	46 59,56	3,025	8,7756	8,4791	,4807	—7,6246
915	Camelop.	7	4	47 23,09	— 2,258	9,7242	9,4269	— ,3537	—9,7214
916	Virginis	8	4	47 57,91	+3,167	—8,7793	—8,4871	+0,5006	+7,9855
917	———	8	2	49 6,73	+3,118	,7740	,4871	,4939	+7,6875
918	———	7	3	49 40,05	3,190	,7805	,4960	,5038	+8,0713
919	Bootis	7	3	49 59,20	2,879	,7911	,5082	,4592	—8,2566
920	———	7.8	4	50 55,84	2,897	,7865	,5079	,4619	—8,2088
921	Bootis	9	4	51 7,30	2,885	—8,7885	—8,5108	+0,4601	—8,2375
922	Virginis	9	1	52 13,42	3,149	8,7730	,5005	,4982	+7,8770
923	———	8	3	53 34,68	3,194	8,7765	,5102	,5043	+8,0666
924	Draconis	8	3	54 35,53	1,683	9,1439	,8817	,2261	—9,1017
925	Virginis	9	4	56 31,48	3,162	8,7695	,5164	,5000	+7,9272
926	Hydræ	8	4	57 0,53	3,384	—8,8101	—8,5591	+0,5294	+8,4488
927	Virginis	7.8	3	58 18,78	3,250	,7790	,5337	,5119	+8,2036
928	Solitarii	10	3	58 57,29	3,296	,7865	,5442	,5180	+8,2977
929	Hydræ	9	3	59 13,35	3,391	,8079	,5667	,5303	+8,4477
930	Virginis	8	3	59 36,69	3,207	,7709	,5315	,5061	+8,0810
931	Virginis	7.8	4	14 1 11,06	3,026	—8,7608	—8,5281	+0,4809	—7,5547
932	———	8	3	1 25,43	2,937	,7677	,5362	,4679	—8,0490
933	———	8.9	2	2 35,11	3,185	,7647	,5380	,5031	+7,9920
934	———	8.9	1	2 43,23	3,006	,7599	,5341	,4780	—7,7144
935	———	8	1	4 2,69	3,095	,7571	,5367	,4907	+7,3445
936	Bootis	7.8	3	4 40,28	2,961	—8,7611	—8,5436	+0,4714	—7,9441
937	———	8	2	6 2,07	2,962	,7594	,5476	,4716	—7,9358
938	κ^1 ———	8.9	3	7 35,09	2,146	,9686	,7630	,3316	—8,8683
939	———	9	4	9 38,56	2,914	,7509	,5633	,4645	—8,0807
940	Virginis	7.8	3	10 14,63	3,013	,7507	,5566	,4790	—7,6373
941	Solitarii	7.8	4	10 22,77	3,299	—8,7705	—8,5772	+0,5184	+8,2554
942	Virginis	8	3	11 27,82	2,984	,7509	,5618	,4748	—7,8135
943	Hydræ	9	2	13 58,32	3,445	,7952	,6166	,5372	+8,4532
944	———	8	4	14 30,35	3.446	,7942	,6180	,5373	+8,4513
945	Virginis	7.8	3	16 7,87	3,089	,7422	,5726	,4898	+7,1927

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s	″
901	4	— 2 29 16,29	—18,279	+9,6180	+8,5997	—1,2620	+9,6130	182	,000	+0,06
902	4	—11 33 32,96	18,277	,5340	9,2625	,2619	,6141	183	+,013	+ ,02
903	4	— 5 52 56,36	18,200	,5899	8,9700	,2601	,6221	192	+,007	— ,06
904	4	— 1 37 12,79	18,200	,6253	8,4130	,2601	,6221	193	+,011	+ ,01
905	4	—20 10 7,06	18,086	,4133	9,4932	,2573	,6345	212	+,015	— ,14
906	5	—32 10 39,21	18,067	+9,1367	+9,6816	—1,2569	+9,6364	217	—,009	— ,02
907	3	+22 4 19,57	18,061	,7520	—9,5293	,2567	,6371	219	+,011	+ ,07
908	5	+22 5 35,74	18,058	,7520	—9,5295	,2567	,6374	220	+,004	+ ,08
909	4	+12 45 0,45	18,054	,7168	—9,2962	,2556	,6421	223	+,003	— ,05
910	4	+14 50 28,30	18,008	,7259	—9,3612	,2554	,6426	224	+,014	— ,26
911	3	+13 33 17,40	17,941	+9,7210	—9,3215	—1,2543	+9,6475	232	—,017	— ,03
912	5	+ 8 21 13,48	17,922	,6937	9,1126	,2534	,6510	236	+,009	— ,07
913	4	+ 8 29 4,85	17,904	,6946	9,1181	,2529	,6528	239	+,005	— ,01
914	5	+ 4 4 54,65	17,890	,6665	8,7996	,2526	,6541	241	+,008	— ,08
915	2	+83 34 27,99	17,895	,6955	9,9480	,2527	,6535	263	—,069	— ,08
916	3	— 9 13 34,56	17,853	+9,5502	+9,1559	—1,2517	+9,6575	245	—,014	— ,04
917	4	— 4 40 42,02	17,808	,5966	+8,8621	,2506	,6617	252	+,010	— ,07
918	4	—11 14 58,99	17,787	,5263	+9,2390	,2501	,6638	256	+,030	— ,19
919	4	+17 0 29,83	17,772	,7404	—9,4133	,2498	,6649	259	+,010	+ ,08
920	3	+15 21 43,44	17,735	,7332	—9,3692	,2488	,6683	265	+,013	— ,09
921	2	+16 21 4,23	17,727	+9,7380	—9,3957	—1,2486	+9,6690	268	+,017	+ ,07
922	4	— 7 16 23,52	17,681	,5694	+9,0495	,2475	,6730	271	+,020	— ,06
923	4	—11 14 29,00	17,625	,5224	+9,2343	,2461	,6779	278	+,039	— ,05
924	3	+65 10 56,45	17,587	,7910	—9,9011	,2452	,6810	285	+,019	+ ,14
925	4	— 8 15 28,67	17,502	,5563	+9,0987	,2431	,6880	291	+,011	,00
926	4	—25 47 25,64	17,479	+9,2504	+9,5793	—1,2425	+9,6896	294	+,015	— ,10
927	4	—15 24 20,43	17,424	,4579	9,3638	,2412	,6939	300	+,001	— ,18
928	4	—18 56 14,16	17,396	,3997	9,4496	,2404	,6961	304	+,029	— ,06
929	3	—25 52 7,51	17,384	,2405	9,5779	,2401	,6970	305	+,001	— ,12
930	3	—11 46 56,40	17,367	,5092	9,2478	,2397	,6983	307	+,044	— ,09
931	4	+ 3 34 40,40	17,299	+9,6665	—8,7299	—1,2380	+9,7033	313	+,009	— ,03
932	3	+11 1 50,70	17,287	,7185	—9,2170	,2377	,7042	314	+,012	— ,21
933	2	— 9 42 7,28	17,237	,5340	+9,1618	,2365	,7078	5	+,007	— ,06
934	2	+ 5 10 49,55	17,228	,6794	—8,8888	,2362	,7084	7	+,005	— ,10
935	1	— 2 11 46,70	17,171	,6170	+8,5203	,2348	,7125	13	+,017	— ,12
936	2	+ 8 46 58,14	17,141	+9,7059	—9,1151	—1,2340	+9,7146	18	+,006	— ,07
937	4	+ 8 39 4,17	17,080	,7059	9,1069	,2325	,7187	21	—,005	— ,10
938	2	+52 33 29,06	17,013	,8344	9,8285	,2308	,7232	30	+,027	— ,03
939	4	+12 5 54,54	16,914	,7292	9,2471	,2282	,7296	35	+,012	— ,02
940	4	+ 4 26 11,02	16,885	,6758	8,8121	,2275	,7314	39	+,015	— ,14
941	3	—17 45 45,17	16,876	+9,3944	+9,4102	—1,2273	+9,7320	38	+,002	+ ,01
942	4	+ 6 39 21,76	16,829	,6937	—8,9867	,2260	,7349	47	+,006	,00
943	3	—27 3 32,73	16,706	,1303	+9,5790	,2229	,7423	61	+,002	— ,25
944	3	—26 59 46,02	16,678	,1335	+9,5772	,2221	,7440	63	—,014	— ,08
945	4	— 1 35 43,85	16,604	,6212	+8,3686	,2201	,7485	74	+,001	— ,06

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan 1, 1836.			Annual Preces-sion.	Logarithms of			
				h.	*m.*	*s.*	*s*	*a*	*b*	*c*	*d*
946	Bootis	8	4	14	16	27,70	+2,026	—8,9753	—8,8067	+0,3066	—8,8847
947	Hydræ	8	2		17	11,47	3,438	,7874	,6221	,5363	+8,4311
948	Virginis	10	2		18	12,77	3,027	,7394	,5781	,4874	+6,5253
949	———	7	4		20	18,77	2,982	,7394	,5865	,4745	—7,7877
950	Bootis	7.8	4		22	5,33	2,944	,7397	,5940	,4689	—7,9411
951	Virginis	8	3		22	12,10	3,101	—8,7344	—8,5893	+0,4915	+7,3534
952	Centauri	8	3		24	28.92	3,878	,8872	,7511	,5886	+8,7423
953	Virginis	8	2		24	42,09	3,153	,7332	,5979	,4987	+7,7678
954	———	8	4		25	2,10	3,153	,7327	,5987	,4987	+7,7626
955	———	8	2		27	22,39	3,010	,7281	,6033	,4786	—7,5893
956	Virginis	7	3		27	32,81	3.194	—8,7319	—8,6080	+0,5043	+7,9222
957	———	9	2		27	38,78	3,111	,7272	,6035	,4929	+7,4579
958	Solitarii	8	1		28	39,02	3,403	,7593	,6399	,5319	+8,3419
959	Virginis	8	3		30	23.43	3,140	,7242	,6115	,4969	+7,6717
960	———	9.10	2		30	24,97	3,225	,7304	,6177	,5085	+8,0071
961	Virginis	8	4		32	21,27	3,151	—8,7218	—8,6167	+0,4984	+7,7239
962	Libræ	7	2		33	12,67	3,237	,7273	,6253	,5101	+8,0272
963	———	8	2		33	28,51	3,236	,7267	,6260	,5100	+8,0251
964	———	8	3		33	42,81	3,445	,7582	,6586	,5372	+8,3747
965	Virginis	8	4		35	45,13	3,149	,7167	,6248	,4982	+7,7150
966	Bootis	7	3		38	22,68	2,827	—8,7272	—8,6454	+0,4513	—8,1627
967	Libræ	8	3		39	52,36	3,258	,7184	,6424	,5129	+8,0520
968	Lupi	8	2		42	51,11	3,634	,7795	,7150	,5604	+8,5152
969	Libræ	8	4		43	33,27	3,315	,7187	,6568	,5205	+8,1519
970	———	8	3		45	22,67	3,065	,6990	,6443	,4864	—6,3089
971	Solitarii	9	3		45	53,12	3,480	—8,7408	—8,6879	+0,5416	+8,3659
972	Libræ	8	2		48	55.85	3,338	,7117	,6705	,5235	+8,1702
973	Virginis	7	4		50	20,65	3,137	,6918	,6559	,4965	+7,5701
974	Bootis	8	4		50	32,97	2,906	,6971	,6619	,4633	—7,9432
975	Libræ	7	4		53	54,36	3,349	,7034	,6813	,5249	+8,1691
976	Libræ	8	4		54	24,86	3,331	—8,7004	—8,6800	+0,5226	+8,1394
977	———	8	2		54	53,65	3,180	,6857	,6670	,5024	+7,7675
978	———	8.9	2		55	39,94	3,306	,6949	,6792	,5193	+8,0901
979	Serpentis	8	3		55	58,95	3,072	,6805	,6661	,4874	+6,3483
980	Bootis	8	4		56	42,51	2,600	,7281	,7162	,4150	-8,3801
981	Serpentis	7	3		58	13,25	3,068	—8,6773	—8,6712	+0,4868	—7,4792
982	Libræ	7.8	4		58	22,11	3,205	8,6806	8,6753	0,5058	+7,8400
983	———	8	4		59	11,45	3,258	8,6832	8,6809	0,5129	+7,9797
984	Ursæ Min.	8	3		59	14,39	0,295	9,1673	9,1645	9,4698	—9,1436
985	Serpentis	8.9	4		59	37,44	3,059	8,6738	8,6730	0,4856	—6,6690
986	Libræ	9	4	15	1	38,01	3,442	—8,7010	—8,7081	+0,5367	+8,2645
987	———	7.8	4		2	14,01	3,279	,6790	,6883	,5157	+8,0126
988	Serpentis	7	4		3	15,50	3,011	,6675	,6806	,4787	—7,4448
989	Scorpii	7.8	2		3	54,64	3,510	,7071	,7227	,5453	+8,3281
990	Draconis	8	3		4	5,05	1,512	,9443	,9602	,1795	—8,8740

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of				Piazzi No.	Annual P. M.	
				a′	b′	c′	d′		A. R.	Decn.
		° ′ ″	″						s.	″
946	4	+54 16 11,78	−16,587	+9,8513	−9,8272	−1,2198	+9,7492	79	+,018	−0,10
947	4	−26 6 13,34	16,544	,1492	+9,5604	,2168	,7515	78	+,009	+ ,90
948	4	− 0 20 35,75	16,498	,6345	+7,7014	,2174	,7542	81	+,033	− ,16
949	4	+ 6 25 12,65	16,395	,6964	−8,9610	,2147	,7598	93	+,006	+ ,02
950	4	+ 9 5 16,02	16,304	,7168	−9,1086	,2123	,7647	99	+,016	− ,04
951	4	− 2 22 27,68	16,297	+9,6117	+8,5291	−1,2121	+9,7650	100	+,012	+ ,08
952	4	−45 44 10,94	16,181	− ,0792	+9,7621	,2090	,7709	106	+,006	+ ,02
953	4	− 6 12 32,27	16,171	+ ,5670	+8,9413	,2087	,7709	108	+,012	− ,12
954	4	− 6 8 39,31	16,153	+ ,5659	+8,9362	,2083	,7723	111	+,010	− ,13
955	4	+ 4 11 19,50	16,032	,6776	−8,7644	,2050	,7783	120	+,020	− ,13
956	4	− 8 53 26,38	16,021	+9,5276	+9,0930	−1,2047	+9,7788	121	+,004	− ,04
957	4	− 3 3 35,46	16,017	,6031	+8,6333	,2046	,7790	122	+,006	+ ,07
958	4	−22 26 50,27	15,962	,2279	+9,4836	,2031	,7816	129	−,050	+ ,02
959	5	− 5 4 25,72	15,869	,5775	+8,8460	,2006	,7859	139	+,014	− ,16
960	4	−10 52 50,33	15,869	,4928	+9,1753	,2006	,7859	138	+,029	− ,08
961	4	− 5 45 2,02	15,766	+9,5682	+8,8978	−1,1977	+9,7906	144	+,009	− ,08
962	4	−11 31 43,93	15,722	,4786	+9,1954	,1965	,7925	146	+,029	− ,03
963	4	−11 26 53,08	15,704	,4800	+9,1925	,1960	,7933	151	−,005	− ,04
964	3	−24 24 18,40	15,690	,1399	+9,5100	,1956	,7940	153	+,003	− ,07
965	4	− 5 41 21,51	15,580	,5670	+8,8889	,1926	,7987	162	+,020	− ,02
966	4	+15 49 29,94	15,437	+9,7716	−9,3220	−1,1885	+9,8047	178	+,018	− ,03
967	3	−12 25 47,93	15,350	9,4564	+9,2178	,1861	,8082	181	+,002	− ,02
968	4	−32 56 50,24	15,180	7,9031	+9,6150	,1813	,8149	192	,000	− ,02
969	3	−15 43 10,02	15,142	9,3801	+9,3114	,1802	,8164	195	+,005	− ,09
970	3	+ 0 14 54,15	15,034	9,6395	−7,4850	,1771	,8204	205	+,001	− ,18
971	4	−24 56 38,94	15,007	+9,0569	+9,4995	−1,1763	+9,8214	208	+,019	− ,17
972	4	−16 42 1,05	14,828	,3483	+9,3276	,1711	,8279	223	−,004	− ,07
973	4	− 4 19 24,08	14,746	,5809	+8,7450	,1687	,8308	229	−,003	− ,16
974	5	+10 9 32,83	14,737	,7380	−9,1124	,1683	,8312	230	+,003	− ,18
975	4	−16 58 50,76	14,531	,3304	+9,3258	,1623	,8381	246	+,013	− ,09
976	4	−15 56 32,60	14,503	+9,3747	+9,2985	−1,1614	+9,8390	252	+,016	− ,03
977	4	− 6 55 22,24	14,474	,5403	+8,9404	,1606	,8399	254	+,019	− ,02
978	4	−14 21 4,80	14,426	,3944	+9,2522	,1591	,8415	256	+,007	− ,07
979	4	− 0 15 41,64	14,406	,6345	+7,5244	,1585	,8422	257	,000	− ,27
980	4	+26 41 8,13	14,365	,8457	−9,5074	,1573	,8435	264	+,006	+ ,02
981	4	+ 3 38 50,26	14,272	+9,6785	−8,6544	−1,1545	+9,8464	271	+,016	− ,10
982	4	− 8 17 23,00	14,259	,5172	+9,0115	,1541	,8468	272	+,004	+ ,01
983	3	−11 24 46,25	14,210	,4563	+9,1471	,1526	,8483	276	−,001	− ,05
984	3	+71 15 30,31	14,217	,9063	−9,8271	,1528	,8481	285	,000	+ ,17
985	4	+ 0 34 41,14	14,185	,6444	−7,8451	,1518	,8491	278	+,007	− ,07
986	4	−21 26 52,09	14,057	+9,1553	+9,4093	−1,1479	+9,8530	289	,000	− ,05
987	3	−12 25 37,35	14,019	9,4314	+9,1784	,1467	,8541	1	+,013	+ ,01
988	4	+ 3 27 14,30	14,021	9,6785	−8,6201	,1448	,8559	4	+,009	− ,01
989	4	−24 41 9,25	13,912	8,9685	+9,4625	,1435	,8572	5	−,019	− ,19
990	4	+58 17 10,92	13,910	9,9248	−9,7710	,1433	,8573	12	+,009	− ,01

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.			Annual Preces-sion.	Logarithms of			
				h.	*m.*	*s.*	*s.*	*a*	*b*	*c*	*d*
991	Scorpii	8	3	15	4	17,96	+3,492	—8,7032	—8,7203	+0,6431	+8,3088
992	2 Libræ	9.10	4		5	14,86	3,380	,6843	,7048	,5289	+8,1704
993	———	8	4		5	56,57	3,114	,6620	,6852	,4933	+7,3456
994	Serpentis	8	4		9	15,08	3,074	,6547	,6906	,4877	+6,4986
995	Lupi	*var.*	4		10	27,46	4,034	,7977	,8384	,6057	+8,6422
996	Libræ	8.9	4		11	36,19	3,251	—8,6571	—8,7019	+0,4120	+7,9157
997	———	8	4		11	49,04	3,330	,6641	,7096	,5224	+8,0714
998	———	8	4		12	26,93	3,173	,6506	,6984	,5015	+7,6722
999	Cor. Bor.	8.9	2		12	47,20	2,489	,7106	,7597	,3960	—8,4116
1000	Libræ	8	3		12	51,81	3,177	,6499	,6993	,5020	+7,6856
1001	Cor. Bor.	8.9	2		13	32,82	2,484	—8,7097	—8,7617	+0,3951	—8,4128
1002	Libræ	8	3		13	42,86	3,246	,6522	,7049	,5113	+7,8947
1003	Serpentis	8	3		15	57,03	3,068	,6406	,7019	,4869	—5,4053
1004	———	8	4		16	3,34	2,899	,6464	,7080	,4622	—7,8632
1005	Libræ	9.10	3		16	11,26	3,224	,6451	,7075	,5084	+7,8298
1006	Serpentis	8	3		16	21,65	2,896	—8,6459	—8,7088	+0,4618	—7,8710
1007	Draconis	8	2		16	31,98	1,651	,8756	,9387	,2193	—8,7863
1008	Libræ	8	4		16	37,22	3,453	,6683	,7324	,5382	+8,2190
1009	Bootis	8	2		18	18,89	2,275	,7384	,8087	,3570	—8,5269
1010	Libræ	8.9	3		18	28,34	3,162	,6368	,7079	,4999	+7,5982
1011	Libræ	7.8	4		18	49,41	3,452	—8,6631	—8,7354	+0,5381	+8,2104
1012	———	8	3		19	16,13	3,264	,6410	,7152	,5137	+7,9171
1013	———	*var.*	4		19	42,40	3,165	,6342	,7099	,5004	+7,6119
1014	Cor. Bor.	6.7	2		19	52,30	2,352	,7181	,7943	,3714	—8,4756
1015	Serpentis	8.9	2		21	19,36	3,027	,6290	,7108	,4810	—7,2356
1016	Libræ	8.9	5		21	41,65	3,409	—8,6501	—8,7337	+0,5326	+8,1466
1017	———	8	1		21	53,25	3,350	,6429	,7270	,5250	+8,0643
1018	Scorpii	8	3		22	12,79	3,609	,6789	,7646	,5574	+8,3450
1019	Libræ	8	4		23	10,90	3,422	,6481	,7374	,5343	+8,1574
1020	———	8	3		24	15,14	3,243	,6279	,7211	,5109	+7,8485
1021	Serpentis	7.8	3		25	5,31	2,998	—8,6208	—8,7173	+0,4768	—7,4497
1022	Libræ	8.9	3		29	5,16	3,323	,6224	,7346	,5215	+7,9927
1023	Lupi				29		4,094	,7524	,8669	,6121	+8,5948
1024	Serpentis	7.8	4		30	3,07	2,742	,6274	,7432	,4381	—8,0950
1025	Libræ	7.8	3		30	41,70	3,324	,6184	,7369	,5215	+7,9877
1026	Libræ	8	3		32	9,02	3,324	—8,6146	—8,7388	+0,5215	+7,9812
1027	Scorpii	7.8	3		33	23,67	3,566	,6417	8,7709	0,5522	+8,2660
1028	Serpentis	8	5		35	31,09	3,013	,5944	8,7321	0,4790	—7,3059
1029	Draconis	8	4		36	49,92	0,597	,9870	9,1292	9,7760	—8,9488
1030	29 Serpentis	7.8	4		38	51,45	2,754	,6024	8,7532	0,4399	—8,0436
1031	31 v Serpentis	7	4		39	40,54	2,782	—8,5974	—8,7513	+0,4444	—7,9998
1032	ξ^2 Lupi	6.7			46		3,807	,6425	,8247	,5806	+8,3842
1033	Serpentis	*var.*	2		46	54,69	2,890	,5682	,7518	,4609	—7,7657
1034	———	8	5		49	50,06	2,710	,5749	,7707	,4330	—8,0555
1035	Lupi	8	3		53	31,63	3,865	,6292	,8411	,5871	+8,3878

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A.R.	Decn.
		° ′ ″	″						s.	″
991	4	—23 45 24,70	—13,890	+9,0253	+9,4463	—1,1427	+9,8579	8	+,007	+0,01
992	1	—17 49 10,56	13,834	+9,2810	+9,3251	,1410	,8595	15	+,005	— ,10
993	4	— 2 44 49,85	13,788	+9,6010	+8,5212	,1395	,8608	17	+,009	— ,04
994	4	— 0 22 45,78	13,575	+9,6325	+7,6747	,1327	,8667	28	+,010	— ,13
995	4	—44 20 14,88	13,493	—9,3139	+9,7727	,1301	,8689	30	—,012	— ,06
996	4	—10 26 3,79	13,424	+9,4654	+9,0845	—1,1279	+9,8707	38	+,016	— ,17
997	4	—14 46 32,71	13,422	9,3617	+9,2328	,1275	,8711	40	+,001	— ,17
998	5	— 6 0 59,15	13,373	9,5478	+8,8459	,1262	,8721	43	+,009	— ,05
999	4	+30 9 55,75	13,350	9,8751	—9,5245	,1255	,8727	46	—,006	— ,15
1000	4	— 6 13 46,43	13,347	9,5453	+8,8591	,1254	,8728	45	+,017	— ,06
1001	4	+30 20 18,76	13,303	+9,8768	—9,5251	—1,1239	+9,8739	51	+,003	— ,13
1002	3	—10 3 36,68	13,290	9,4713	+9,0641	,1235	,8742	48	+,002	— ,32
1003	3	+ 0 2 26,75	13,141	9,6375	—6,5814	,1186	,8780	60	+,020	— ,20
1004	4	+ 9 29 29,16	13,136	9,7419	—9,0333	,1185	,8781	62	+,006	— ,11
1005	4	— 8 47 26,90	13,123	9,4955	+9,0007	,1180	,8784	61	+,011	— ,08
1006	4	+ 9 40 28,71	13,114	+9,7443	—9,0409	—1,1177	+9,8786	66	+,011	— ,16
1007	3	+54 31 2,10	13,110	9,9385	—9,7263	,1176	,8788	68	+,028	— ,11
1008	3	—20 47 52,83	13,092	9,1367	+9,3657	,1170	,8792	65	+,012	— ,04
1009	2	+37 55 32,23	12,986	9,9085	—9,6000	,1135	,8818	74	—,008	+ ,01
1010	3	— 5 14 22,18	12,973	9,5575	+8,7725	,1130	,8821	70	+,005	— ,18
1011	4	—20 37 59,37	12,950	+9,1367	+9,3577	—1,1123	+9,8826	71	—,027	— ,01
1012	4	—10 52 24,13	12,919	9,4487	+9,0853	,1112	,8834	77	+,009	— ,08
1013	4	— 5 25 44,66	12,922	9,5563	+8,7860	,1103	,8840	79	+,008	— ,11
1014	4	+34 54 34,75	12,885	9,8998	—9,5656	,1100	,8842	81	+,014	— ,14
1015	4	+ 2 19 39,54	12,785	9,6674	—8,4113	,1067	,8866	85	+,033	— ,10
1016	4	—18 16 2,13	12,754	+9,2304	+9,3002	—1,1056	+9,8873	87	—,017	+ ,01
1017	4	—15 16 45,43	12,744	9,3324	+9,2247	,1053	,8875	88	+,007	— ,13
1018	4	—27 46 1,52	12,717	8,4314	+9,4685	,1044	,8881	90	+,017	— ,06
1019	4	—18 50 20,13	12,654	9.2041	+9,3096	,1028	,8896	94	+,017	— ,01
1020	4	— 9 33 1,32	12,587	9,4742	+9,0185	,0999	,8911	101	+,015	— ,14
1021	4	+ 3 52 56,77	12,527	+9,6866	—8,6248	—1,0979	+9,8924	107	+,013	— ,10
1022	1	—13 33 17,40	12,253	+9,3729	+9,1565	,0882	,8984	127	+,010	+ ,05
1023		—44 4	12,211	—9,3802	+9,6272	,0867	,8993	129		
1024	5	+17 4 33,86	12,188	+9,8116	—9,2515	,0859	,8997	137	+,005	,00
1025	5	—13 30 49,22	12,141	+9,3711	+9,1515	,0843	,9007	139	,000	+ ,02
1026	4	—13 26 4,22	12,039	+9,3729	+9,1452	—1,0806	+9,9028	144	+,015	+ ,02
1027	3	—24 53 10,35	11,950	8,7404	+9,3997	,0774	,9046	149	+,009	— ,11
1028	4	+ 2 57 54,27	11,800	9,6767	—8,4814	,0719	,9076	159	+,005	— ,12
1029	4	+66 19 33,38	11,719	9,9624	—9,7287	,0689	,9091	168	+,022	+ ,03
1030	4	+16 2 32,63	11,568	9,8082	—9,2025	,0632	,9120	171	+,011	— ,05
1031	3	+14 37 30,26	11,511	+9,7973	—9,1616	—1,0611	+9,9131	173	+,005	— ,11
1032	3	—33 28 34,12	11,009	—8,9956	+9,4815	,0417	,9220	205		+ ,01
1033	4	+ 9 4 18,86	10,985	+9,7490	—8,9363	,0408	,9224	209	+,023	+ ,02
1034	4	+17 39 43,95	10,769	+9,8254	—9,2107	,0322	,9260	223	+,001	
1035	4	—34 59 14,18	10,487	—9,1271	+9,4773	,0207	,6305	236	,000	— ,22

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a	b	c	d
				h. m. s.	s.				
1036	Libræ	8	4	15 53 51,21	+3,229	—8,5463	—8,7590	+0,5091	+7,6925
1037	———	8	3	54 26,06	3,229	,5444	,7596	,5091	+7,6898
1038	Scorpii	8.9	3	55 20,47	3,494	,5655	,7847	,5433	+8,1088
1039	———	8	4	55 36,74	3,442	,5584	,7788	,5368	+8,0507
1040	Draconis	8	4	56 25,10	1,433	,7755	,9987	,1562	—8,6888
1041	Scorpii	8	4	56 55,02	3,660	—8,5834	—8,8095	+0,5635	+8,2446
1042	1 Lupi	7.8	5	57 36,67	3,989	,6373	,8665	,6009	+8,4330
1043	Herculis	8	1	58 18,72	2,949	,5301	,7620	,4697	—7,5384
1044	Scorpii	8	4	59 33,67	3,457	,5467	,7844	,5387	+8,0497
1045	———	8.9	3	59 50,14	3,468	,5471	,7859	,5401	+8,0604
1046	Serpentis	8	4	16 0 36,07	2,949	—8,5227	—8,7645	+0,4697	—7,5298
1047	κ² Herculis	8	3	0 40,96	2,702	,5408	,7828	,4317	—8,0185
1048	Scorpii	9	4	2 44,52	3,681	,5658	,8176	,5660	+8,2334
1049	———	8	3	3 12,55	3,472	,5358	,7897	,5406	+8,0503
1050	Serpentis	8.9	4	3 49,22	2,680	,5321	,7884	,4281	—8,0302
1051	Ophiuchi	8	2	5 10,62	3,541	—8,5374	—8,7999	+0,5491	+8,1103
1052	Herculis	8	4	5 16,21	2,935	,5072	,7700	,4676	—7,5577
1053	———	7	4	6 10,21	2,938	,5040	,7708	,4680	—7,5455
1054	Scorpii	8	4	9 10,29	3,766	,5552	,8360	,5759	+8,2609
1055	Regulæ	7	1	9 28,50	4,029	,5990	,8813	,6052	+8,3982
1056	Herculis	8	4	9 41,16	2,654	—8,5138	—8,7967	+0,4239	—8,0319
1057	Scorpii *seq.*	8	2	10 30,74	3,492	,5117	,7987	,5431	+8,0388
1058	——— *præc*	8	1	10 55,11	3,494	,5104	,7992	,5433	+8,0385
1059	——— *seq.*	8.9	1	10 55,69	3,494	,5104	,7992	,5433	+8,0385
1060	Herculis	8.9	3	11 19,82	2,704	,5024	,7927	,4320	—7,9687
1061	Herculis	7.8	3	11 22,08	2,944	—8,4850	—8,7757	+0,4689	—7,4994
1062	———	8.9	4	12 44,97	2,807	,4876	,7848	,4482	—7,8172
1063	Regulæ	7	4	12 56,22	4,029	,5848	,8833	,6052	+8,3820
1064	Serpentis	8	4	14 1,83	3,000	,4734	,7766	,4771	—7,2291
1065	———	8	4	14 7,32	2,996	,4730	,7768	,4765	—7,2545
1066	Herculis	8	3	14 19,12	2,773	—8,4844	—8,7889	+0,4429	—7,8630
1067	Scorpii	8.9	3	15 24,28	3,735	,5253	,8355	,5721	+8,2111
1068	———	8	4	15 35,04	3,580	,5028	,8136	,5539	+8,0961
1069	———	9	4	15 48,41	3,659	,5128	,8246	,5634	+8,1578
1070	Ophiuchi	8		16	3,274	,4686	,7846	,5151	+7,6959
1071	Serpentis	7.8	4	19 13,15	3,000	—8,4524	—8,7815	+0,4771	—7,2037
1072	Scorpii	8.9	4	20 2,53	3,627	,4908	,8234	,5595	+8,1135
1073	Regulæ	8.9	4	23 4,91	3,928	,5237	,8718	,5942	+8,2845
1074	Ophiuchi	9	4	24 35,42	3,016	,4302	,7857	,4794	—7,0581
1075	Herculis	8.9	4	27 49,34	2,569	,4488	,8210	,4098	—8,0236
1076	Ophiuchi	8	1	28 3,26	3,197	—8,4169	—8,7905	+0,5047	+7,4338
1077	Herculis	8	4	28 48,71	2,673	,4324	,8100	,4270	—7,9177
1078	Ophiuchi	8.9	3	30 45,54	3,224	,4059	,7937	,5084	+7,5039
1079	Herculis	8	3	31 10,01	2,427	,4521	,8421	,3851	—8,1146
1080	———	8.9	4	31 44,24	2,774	,4100	,8029	,4431	—7,7734

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of				Piazzi No.	Annual P. M.	
				a′	*b′*	*c′*	*d′*		A.R.	Decn.
		° ′ ″	″						s	″
1036	5	− 8 1 49,29	−10,472	+9,4928	+8,8643	−1,0200	+9,9308	240	+,006	− ,01
1037	2	− 8 1 2,00	10,427	+9,4928	+8,8616	,0182	,9315	243	+,011	,00
1038	4	−20 26 36,12	10,357	+9,0334	+9,2556	,0153	,9325	244	+,011	− ,21
1039	4	−18 4 53,22	10,337	+9,1673	+9,2048	,0144	,9328	249	+,001	+ ,01
1040	4	+54 58 55,53	10,288	+9,9782	−9,6236	,0123	,9356	262	+,002	− ,12
1041	1	−27 16 4,24	10,237	−7,9031	+9,3695	−1,0102	+9,9343	257	+,004	− ,02
1042	2	−38 39 23,51	10,182	−9,2988	+9,5016	,0079	,9352	260	+,011	+ ,09
1043	3	+ 5 51 37,02	10,137	+9,7152	−8,7122	,0059	,9358	269	+,008	− ,07
1044	4	−18 33 6,01	10,036	+9,1303	+9,2026	,0016	,9373	273	+,009	+ ,02
1045	3	−19 0 51,87	10,017	+9,1072	+9,2121	,0007	,9376	275	+,015	+ ,16
1046	4	+ 5 50 46,53	9,966	+9,7160	−8,7036	−0,9985	+9,9383	281	+,017	− ,06
1047	3	+17 29 53,33	9,961	+9,8280	−9,1741	,9983	,9384	285	+,001	− ,03
1048	4	−27 42 9,40	9,794	−8,3424	+9,3565	,9909	,9408	5	+,005	+ ,03
1049	3	−19 4 18,61	9,758	+9,0934	+9,2018	,9893	,9412	7	+,004	− ,01
1050	5	+18 21 28,23	9,717	+9,8370	−9,1836	,9875	,9418	11	−,003	+ ,05
1051	4	−21 57 27,85	9,610	+8,8692	+9,2537	−0,9827	+9,9433	17	+,001	− ,12
1052	5	+ 6 27 46,91	9,605	+9,7243	−8,7310	,9825	,9433	20	+,013	+ ,01
1053	4	+ 6 19 29,10	9,538	+9,7235	−8,7190	,9795	,9442	24	+,018	+ ,03
1054	3	−30 29 47,94	9,301	−8,8808	+9,3623	,9685	,9473	35	,000	− ,04
1055	4	−39 1 24,20	9,276	−9,3463	+9,4645	,9673	,9477	37	+,005	− ,07
1056	4	+19 15 20,32	9,265	+9,8463	−9,1830	−0,9669	+9,9478	43	+,017	− ,07
1057	4	−19 39 10,32	9,198	+9,0414	+9,1888	,9637	,9486	45	,000	− ,10
1058	4	−19 42 55,50	9,167	+9,0334	+9,1883	,9622	,9490	48	,000	− ,08
1059	3	−19 42 43,27	9,167	+9,0334	+9,1883	,9622	,9490	49	−,003	− ,11
1060	5	+17 1 16,14	9,141	+9,8299	−9,1254	,9610	,9494	53	−,007	+ ,06
1061	4	+ 5 56 31,76	9,136	+9,7193	−8,6732	−0,9607	+9,9494	52	+,012	− ,05
1062	4	+12 20 18,86	9,026	+9,7882	−8,9831	,9555	,9510	57	+,008	− ,07
1063	5	−38 48 3,00	9,006	−9,3483	+9.4497	,9545	,9510	55	+,017	− ,06
1064	4	+ 3 16 7,13	8,927	+9,6848	−8,4045	,9507	,9520	62	+,003	− ,05
1065	4	+ 3 28 38,75	8,917	+9,6875	−8,4298	,9502	,9521	63	+,017	− ,15
1066	4	+13 51 5,82	8,907	+9,8028	−9,0263	−0,9597	+9,9522	6[illegible]	+,008	− ,09
1067	4	−29 0 52,38	8,813	−8,7482	+9,3289	,9451	,9533	67	+,001	+ ,04
1068	2	−23 4 25,95	8,802	+8,6628	+9,2360	,9446	,9535	68	+,004	− ,02
1069	4	−26 11 2,40	8,786	−7,9031	+9,2868	,9438	,9537	70	+,013	− ,04
1070		− 9 41	8,718	+9,4409	+8,8658	,9404	,9544	76		
1071	4	+ 3 14 42,67	8,508	+9,6848	−8,3791	−0,9298	+9,9569	85	+,008	− ,03
1072	4	−24 46 45,40	8,449	+8,1461	+9,2475	,9268	,9575	87	+,015	− ,16
1073	4	−35 11 15,49	8,206	−9,2356	+9,3730	,9141	,9602	94	−,007	+ ,01
1074	4	+ 2 26 35,23	8,088	+9,6739	−8,2338	,9079	,9614	109	+,010	− ,13
1075	4	+22 5 10,37	7,831	+9,8739	−9,1667	,9938	,9640	124	+,005	+ ,23
1076	3	− 5 57 14,05	7,810	+9,5263	+8,6075	−0,8926	+9,9642	122	−,002	− ,12
1077	4	+17 48 43,32	7,747	+9,8426	−9,0725	,8891	,9648	130	+,004	− ,08
1078	4	− 7 10 53,89	7,595	+9,4983	+8,6766	,8805	,9663	138	+,010	− ,01
1079	4	+27 22 43,24	7,562	+9,9096	−9,2391	,8766	,9666	141	+,012	− ,03
1080	3	+13 22 8,70	7,519	+9,8035	−8,9376	,8762	,9671	144	+,014	+ ,04

Digitized by Google

No.	Star's name	Mag.	No. Obs.	Right Ascension Jan 1, 1836.	Annual Preces-sion.	Logarithms of *a*	Logarithms of *b*	Logarithms of *c*	Logarithms of *d*
				h. m. s.	*s*				
1081	Serpentis	8 9	3	16 32 34,98	+3,122	—8,3944	—8,7920	+0,4944	+7,0370
1082	Herculis	7.8	4	34 20,31	2,634	,4107	,8179	,4206	—7,9284
1083	Ophiuchi	8.9	4	35 45,37	2,974	,3798	,7952	,4733	—7,2581
1084	Scorpii	8	4	36 55,62	3,892	,4510	,8733	,5902	+8,1917
1085	Nebules	7	4	37 13,77	2,132	,4682	,8916	,3288	—8,2458
1086	Scorpii			39	4,180	—8,4856	—8,9225	+0,6212	+8,3073
1087	———	9	3	41 18,67	4,182	,4754	,9235	,6214	+8,2967
1088	Herculis	7.8	2	42 22,66	2,881	,3493	,8033	,4595	—7,5164
1089	Scorpii	8	4	42 28,25	4,193	,4705	,9257	,6225	+8,2936
1090	———			42	4,187	,4675	,9249	,6219	+8,2892
1091	Draconis	9	3	42 55,40	0,974	—8,6293	—9,0862	+9,9886	—8,5621
1092	Scorpii	7.8	2	43 31,88	4,198	,4653	8,9271	0,6230	+8,2893
1093	———	7.8	3	43 45,45	3,895	,4139	8,8770	0,5905	+8,1524
1094	Draconis	7.8	3	45 4,42	1,214	,5792	9,0492	0,0842	—8,4961
1095	Scorpii	7	3	45 12,22	4,153	,4479	8,9200	0,6184	+8,2612
1096	Scorpii	7.8	2	45 15,90	3,898	—8,4057	—8,8782	+0,5908	+8,1447
1097	Serpentis	7.8	3	45 48,60	3,154	,3264	8,8019	,4989	+7,1590
1098	Ophiuchi	8	4	47 2,84	3,198	,3204	8,8039	,5049	+7,3287
1099	Draconis	8	4	47 16,96	1,497	,5194	9,0033	,1752	—8,4102
1100	Scorpii	8	1	47 47,58	4,039	,4136	8,9019	,6063	+8,1968
1101	Ophiuchi	7.8	3	49 22,35	3,400	—8,3187	—8,8174	+0,5315	+7,7207
1102	———	9	3	49 35,71	3,422	,3194	8,8194	0,5343	+7,7477
1103	———	9	3	50 42,20	3,482	,3181	8,8256	0,5418	+7,8073
1104	Draconis	8	2	50 44,56	0,273	,6793	9,1855	9,4362	—8,6382
1105	Scorpii	9	3	51 51,30	3,867	,3607	8,8762	0,5874	+8,0851
1106	Ophiuchi	7.8	3	52 4,95	2,816	—8,2965	—8,8130	+0,4496	—7,5835
1107	Herculis	9	3	53 57,73	1,633	,4533	,9821	,2130	—8,3259
1108	Scorpii	9	5	54 59,19	3,466	,2894	,8263	,5398	+7,7616
1109	Herculis	7	4	56 45,21	2,602	,2848	,8340	,4153	—7,8171
1110	Ophiuchi	8	4	57 12,03	3,346	,2648	,8174	,5245	+7,5897
1111	Ophiuchi	9	1	59 33,91	3,471	—8,2585	—8,8290	+0,5404	+7,7330
1112	Herculis	8	4	17 1 13,12	2,399	,2784	,8610	,3800	—7,9406
1113	———	9	4	1 26,47	3,713	,2731	,8579	,5697	+7,9226
1114	Ophiuchi	8	6	1 59,44	3,723	,2700	,8595	,5709	+7,9246
1115	———	9	1	2 24,30	3,722	,2670	,8596	,5708	+7,9213
1116	Ophiuchi	8	4	3 51,22	2,883	—8,2119	—8,8152	+0,4598	—7,3608
1117	Herculis	7	3	4 16,12	2,479	,2453	,8517	,3943	—7,8619
1118	———	8	4	4 29,85	2,478	,2433	,8519	,3941	—7,8602
1119	Scorpii	8	3	5 4,54	3,929	,2765	,8906	,5943	+8,0188
1120	Ophiuchi	9	3	5 5,29	3,752	,2505	,8646	,5743	+7,9190
1121	Herculis	9	4	6 46,94	2,732	—8,1981	—8,8262	+0,4365	—7,5963
1122	———	8	3	6 52,36	2,726	,1981	,8267	,4355	—7,6035
1123	39 Ophiuchi	7	4	8 1,17	3,651	,2134	,8524	,5624	+7,8244
1124	Herculis	7	2	8 52,21	2,490	,2067	,8521	,3962	—7,8146
1125	Ophiuchi	8	6	10 17,87	3,128	,1551	,8142	,4953	+6,8173

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s.	″
1081	4	— 2 30 41,61	— 7,449	+9,5944	+8,2127	—0,8721	+9,9677	148	,000	—0,35
1082	4	+19 14 26,44	7,308	+9,8555	—9,0796	,8638	,9690	160	+,021	— ,11
1083	3	+ 4 19 56,92	7,188	+9,7016	—8,4329	,8566	,9701	166	+,017	— ,09
1084	4	—33 23 33,20	7,090	—9,1847	+9,2894	,8507	,9710	167	+,012	+ ,05
1085	4	+36 49 16,87	7,074	+9,9581	—9,3253	,8496	,9711	172	+,007	— ,03
1086		—41 32	6,883	—9,4742	+9,3575	—0,8377	+9,9727	179		
1087	4	—41 29 55,99	6,729	—9,4757	+9,3472	,8279	,9740	192	—,002	— ,01
1088	4	+ 8 27 34,70	6,647	+9,7536	—8,6878	,8226	,9747	208	+,010	— ,05
1089	4	—41 42 43,12	6,630	—9,4829	+9,3427	,8215	,9748	199	—,003	,00
1090		—41 32	6,603	—9,4786	+9,3394	,8197	,9750	204		
1091	4	+58 57 5,71	6,608	+0,0137	—9,4509	—0,8201	+9,9750	217	+,015	— ,02
1092	3	—41 48 47,29	6,542	—9,4871	+9,3377	,8157	,9755	209	—,012	— ,09
1093	4	—33 11 43,42	6,525	—9,1903	+9,2511	,8146	,9757	211	+,020	— ,03
1094	3	+55 40 38,45	6,432	+0,0116	—9,4233	,8083	,9764	229	+,027	— ,19
1095	4	—40 33 8,14	6,404	—9,4564	+9,3178	,8064	,9766	218	+,008	— ,15
1096	4	—33 14 0,18	6,399	—9,1931	+9,2431	—0,8061	+9,9767	222	+,002	+ ,11
1097	4	— 3 53 22.43	6,360	+9,5670	+8,3341	,8034	,9769	226	+,011	+ ,04
1098	4	— 5 51 7,84	6,255	+9,5250	+8,5025	,7962	,9777	235	+,019	— ,08
1099	4	+51 2 56,18	6,249	+0,0047	—9,3847	,7958	,9778	241	+,004	+ ,05
1100	4	—37 21 21,89	6,194	—9,3655	+9,2731	,7919	,9782	237	+,024	— ,05
1101	4	—14 36 33,92	6,060	+9,2528	+8,8825	—0,7825	+9,9792	244	+,001	— ,09
1102	4	—15 33 5,52	6,044	+9,2095	+8,9073	,7813	,9793	245	+,014	— ,23
1103	2	—17 57 33,14	5,949	+9,0719	+8,9617	,7745	,9800	254	+,006	+ ,01
1104	4	+65 28 19,22	5,966	+0,0204	—9,4326	,7757	,9798	264	+,032	— ,23
1105	4	—32 0 33,00	5,849	—9,1430	+9,1895	,7671	,9807	259	+,001	— ,05
1106	4	+11 10 4,50	5,838	+9,7860	—8,7513	—0,7662	+9,9807	262	+,014	+ ,02
1107	4	+48 14 54,50	5,687	+0,0017	—9,3256	,7549	,9818	275	+,005	+ ,06
1108	4	—17 14 57,56	5,592	+9,1106	+8,9177	,7476	,9824	274	+,015	— ,09
1109	4	+19 55 28,11	5,446	+9,8669	—8,9664	,7361	,9833	287	+,005	— ,15
1110	4	—12 10 58,38	5,407	+9,3444	+8,7559	,7329	,9836	288	+,005	— ,09
1111	3	—17 20 55,50	5,204	+9,1001	+8,8889	—0,7164	+9,9848	300	+,012	,00
1112	4	+27 21 23,32	5,069	+9,9185	—9,0652	,7049	,9856	312	+,016	+ ,05
1113	4	—26 29 22,80	5,047	—8,6434	+9,0506	,7030	,9858	308	+,010	— ,06
1114	8	—26 49 44,02	4,996	—8,6990	+9,0512	,6986	,9861	311	+,001	— ,09
1115	1	—26 48 41,14	4,962	—8,6990	+9,0480	,6957	,9863	1	—,007	— ,02
1116	4	+ 8 6 2,67	4,849	+9,7536	—8,5326	—0,6856	+9,9869	8	+,022	— ,07
1117	4	+24 26 35,47	4,815	+9,9009	—8,9972	,6826	,9871	11	+,026	— ,06
1118	3	+24 27 23,15	4,792	+9,9015	—8,9955	,6805	,9872	15	+,020	— ,11
1119	4	—33 32 23,80	4,736	—9,2430	+9,1159	,6754	,9875	10	+,011	+ ,07
1120	4	—27 46 16,45	4,736	—8,8388	+9,0419	,6754	,9875	12	+,012	— ,09
1121	4	+14 29 44,79	4,594	+9,8215	—8,7583	—0,6622	+9,9883	25	—,001	— ,42
1122	4	+14 44 48,46	4,588	+9,8248	—8,7651	,6616	,9883	26	+,020	— ,16
1123	2	—24 5 49,65	4,590	—7,3010	+8,9609	,6519	,9888	31	+,005	— ,05
1124	5	+23 55 52,28	4,424	+9,8987	—8,9517	,6458	,9892	37	,000	— ,01
1125	4	— 2 37 37,48	4,293	+9,5888	+7,9930	,6327	,9898	45	—,001	— ,08

Digitized by Google

No.	Star's name	Mag.	No. Obs.	Right Ascension Jan. 1, 1836.			Annual Precession.	Logarithms of			
				h.	m.	s.	s.	a	b	c	d
1126	Ophiuchi	7.8	4	17	10	20,14	+3,716	—8,2019	—8,8615	+0,5701	+7,8496
1127	———	8	4		10	47,47	3,126	,1510	,8143	,4950	+6,8021
1128	———	8	3		11	15,47	3,715	,1935	,8617	,5700	+7,8405
1129	Serpentis	8	4		11	46,90	3,368	,1529	,8254	,5274	+7,5023
1130	Ophiuchi	9	4		12	9,22	3,634	,1767	,8517	,5604	+7,7756
1131	Herculis	7	2		12	38,63	1,516	—8,3259	—9,0053	+0,1807	—8,2093
1132	Draconis	9	2		12	44,89	1,110	,3898	9,0699	,0453	—8,3097
1133	Ophiuchi	8	1		12	52,11	2,847	,1383	8,8208	,4544	—7,3596
1134	———	9	3		13	6,37	3,676	,1722	8,8573	,5654	+7,7971
1135	Herculis	7	2		13	28,88	2,438	,1719	8,8602	,3870	—7,8090
1136	Scorpii	8.9	3		13	36,73	3,526	—8,1499	—8,8401	+0,5473	+7,6687
1137	Ophiuchi	8	2		14	4,17	2,839	,1276	,8217	,4532	—7,3629
1138	———	8	3		14	4,76	3,642	,1587	,8534	,5613	+7,7625
1139	———	8.9	1		14	59,11	3,280	,1179	,8212	,5159	+7,3217
1140	Scorpii	8	4		15	49,88	3,749	,1557	,8677	,5739	+7,8194
1141	Ophiuchi	8	2		16	5,82	2,752	—8,1142	—8,8282	+0,4396	—7,4839
1142	———	7	2		16	7,59	2,860	,1066	8,8214	,4564	—7,3010
1143	Herculis	8.9	2		16	52,36	2.536	,1270	8,8493	,4041	—7,7018
1144	Ophiuchi	8	2		16	55,65	3,579	,1239	8,8469	,5538	+7,6835
1145	Draconis	8	3		17	1,88	1,114	,3469	9,0698	,0469	—8,2660
1146	Ophiuchi	8.9	3		18	1,91	2,699	—8,0990	—8,8332	+0,4312	—7,5313
1147	———				18		2,678	,0974	8,8351	,4278	—7,5516
1148	———	9	3		19	29,00	3,285	,0730	8,8230	,5165	+7,2845
1149	———	7.8	3		19	52,82	2,869	,0677	8,8222	,4577	—7,2417
1150	Draconis	9	2		20	4,32	1,287	,2877	9,0429	,1096	—8,1929
1151	Ophiuchi	9	2		20	7,08	2,839	—8,0665	—8,8239	+0,4532	—7,3011
1152	Serpentis	7	2		21	4,27	3,433	,0658	8,8338	,5357	+7,4927
1153	Ophiuchi	9	3		21	18,84	2,996	,0474	8,8184	,4765	—6,7851
1154	———	8	2		21	27,13	3,299	,0519	8,8244	,5184	+7,2901
1155	Draconis	8.9	2		21	34,10	1,303	,2685	9,0410	,1149	—8,1724
1156	Herculis	9	3		22	17,69	2,528	—8,0699	—8,8518	+0,4028	—7,6488
1157	Ophiuchi	8	4		22	27,95	3,130	,0344	,8186	,4955	+6,7075
1158	———	8	5		22	55,21	3,123	,0289	,8186	,4946	+6,6508
1159	———	8	2		23	21,22	2.648	,0447	,8393	,4229	—7,5265
1160	Serpentis	9	2		23	27,99	3,413	,0366	,8328	,5331	+7,4400
1161	Ophiuchi	9	4		23	34,38	3,064	—8,0206	—8,8185	+0,4863	—5,4844
1162	———	8.9	3		24	6,78	3,626	,0499	,8543	,5594	+7,6400
1163	Herculis	8	2		24	42.98	2,266	,0760	,8870	,3553	—7,7914
1164	———	7.8	2		24	43,93	2,358	,0629	,8739	,3725	—7,7383
1165	Ophiuchi	8	2		25	31,42	3,671	,0372	,8602	,5648	+7,6552
1166	53 Ophiuchi *præc.*	8	3		26	49,37	2,842	—7,9870	—8,8256	+0,4536	—7,2128
1167	———	7.8	5		27	24,54	3,520	,9960	,8436	,5465	+7,5060
1168	———	7	4		28	13,67	2,783	,9719	,8295	,4445	—7,2951
1169	Herculis	7.8	3		28	59,33	2,557	,9820	,8501	,4077	—7,5383
1170	Ophiuchi	8	4		29	24,25	2,792	,9545	,8293	,4459	—7,2634

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of *a′*	Logarithms of *b′*	Logarithms of *c′*	Logarithms of *d′*	Piazzi No.	Annual P. M. A. R.	Annual P. M. Decn.
		° ′ ″	″						s.	″
1126	4	−26 22 22,63	−4,287	−8,6532	+8,9779	−0,6321	+9,9898	41	+,004	+ ,04
1127	3	− 2 34 11,87	4,253	+9,5911	+7,9778	,6287	,9900	46	+,002	+ ,02
1128	3	−26 19 37,42	4,207	−8,6632	+8,9690	,6240	,9902	48	+,005	− ,02
1129	4	−12 54 35,42	4,167	+9,3117	+8,6672	,6198	,9904	56	+,001	− ,11
1130	2	−23 24 11,33	4,144	+8,0000	+8,9144	,6175	,9906	57	+,002	− ,06
1131	4	+49 52 6,08	4,104	+0,0124	−9,1947	−0,6133	+9,9907	69	+,026	− ,21
1132	2	+56 15 38,42	4,099	+0,0232	−9,2305	,6126	,9907	72	+,014	− ,04
1133	2	+ 9 35 31,69	4,076	+9,7716	−8,5296	,6102	,9908	66	+,026	− ,20
1134	2	−24 55 57,66	4,053	−8,2787	+8,9307	,6078	,9909	62	+,033	− ,16
1135	4	+25 42 33,81	4,025	+9,9117	−8,9399	,6047	,9911	71	+,017	− ,07
1136	3	−19 17 2,17	4,007	+8,9395	+8,8197	−0,6029	+9,9911	67	+,013	− ,06
1137	3	+ 9 54 6,56	3,973	+9,7745	−8,5325	,5991	,9913	74	+,018	− ,18
1138	2	−23 40 49,47	3,967	+7,4771	+8,9004	,5985	,9913	70	+,008	− ,01
1139	4	− 9 11 47,54	3,893	+9,4330	+8,4921	,5903	,9916	79	+,006	− ,09
1140	4	−27 26 32,16	3,819	−8,8261	+8,9436	,5819	,9920	82	+,026	+ ,02
1141	4	+13 33 30,21	3,802	+9,8142	−8,6477	−0,5800	+9,9920	85	+,014	− ,14
1142	3	+ 9 0 39,74	3,796	+9,7657	−8,4717	,5793	,9921	84	+,009	− ,10
1143	2	+22 4 34,79	3,733	+9,8870	−8,8449	,5720	,9923	92	+,006	+ ,06
1144	3	−21 15 42,73	3,727	+8,6812	+8,8290	,5714	,9924	89	+,031	− ,05
1145	2	+56 5 56,86	3,727	+0,0241	−9,1885	,5714	,9924	101	+,008	+ ,04
1146	3	+15 42 3,62	3,635	+9,8351	−8,6909	−0,5605	+9,9927	102	+,013	− ,09
1147	3	+16 32 1,72	3,607	+9,8426	−8,7093	,5571	,9928	104		+ ,04
1148	4	− 9 21 26,00	3,509	+9,4281	+8,4548	,5452	,9932	107	+,006	− ,07
1149	3	+ 8 35 13,65	3,475	+9,7604	−8,4129	,5409	,9934	108	+,021	− ,23
1150	2	+53 30 1,26	3,469	+0,0212	−9,1434	,5402	,9934	116	+,014	− ,18
1151	4	+ 9 53 36,97	3,452	+9,7752	−8,4707	−0,5380	+9,9935	111	+,017	− ,08
1152	4	−15 29 57,26	3,372	+9,1903	+8,6527	,5278	,9938	114	+,010	− ,18
1153	3	+ 3 8 34,61	3,348	+9,6875	−7,9605	,5248	,9938	119	+,004	− ,27
1154	2	− 9 57 38,98	3,337	+9,4082	+8,4596	,5233	,9939	118	+,011	− ,28
1155	3	+53 16 26,95	3,337	+0,0212	−9,1252	,5233	,9939	124	+,015	+ ,03
1156	3	+22 16 28,74	3,268	+9,8899	−8,7911	−0,5143	+9,9941	123	+,013	− ,10
1157	3	− 2 41 36,72	3,251	+9,5877	+7,8831	,5120	,9942	122	+,006	,00
1158	3	− 2 24 12,76	3,210	+9,5944	+7,8265	,5065	,9944	126	−,010	− ,17
1159	2	+17 38 45,84	3,176	+9,8531	−8,6816	,5018	,9945	133	+,006	− ,09
1160	3	−14 39 55,04	3,164	+9,2304	+8,6017	,5003	,9945	129	+,024	− ,17
1161	2	+ 0 10 10,02	3,153	+9,6345	−6,6604	−0,4987	+9,9946	132	+,013	− ,17
1162	2	−22 54 17,03	3,107	+8,2041	+8,7804	,4923	,9947	134	+,006	− ,07
1163	3	+31 17 9,22	3,061	+9,9464	−8,8992	,4858	,9949	143	+,017	+ ,02
1164	3	+28 15 54,70	3,061	+9,9299	−8,8592	,4858	,9949	141	+,017	− ,02
1165	4	−24 30 28,07	2,980	−8,2304	+8,7902	,4742	,9951	142	−,008	− ,05
1166	3	+ 9 41 26,49	2,876	+9,7738	−8,3827	−0,4588	+9,9955	149	+,010	− ,22
1167	4	−18 52 41,28	2,818	+8,9590	+8,6581	,4500	,9957	152	+,016	− ,05
1168	4	+12 9 31,07	2,755	+9,8007	−8,4613	,4401	,9958	158	+,016	+ ,05
1169	4	+21 6 23,03	2,691	+9,8814	−8,6843	,4300	,9960	163	+,018	− ,01
1170	4	+11 45 46,71	2,651	+9,7973	−8,4303	,4234	,9962	165	+,005	+ ,03

Digitized by Google

No.	Star's name and Mag.			No. Obs.	Right Ascension Jan. 1, 1836.	Annual Precession.	Logarithms of a	b	c	d
					h. m. s.	s.				
1171		Ophiuchi	8	3	17 30 10,93	+2,792	—7,9431	—8,8295	+0,4459	—7,2531
1172		———	8.9	2	30 21,27	3,329	,9392	,8286	,5223	+7,2262
1173		Herculis	8	2	30 27,80	2,568	,9598	,8492	,4096	—7,5069
1174		Ophiuchi	9	2	30 50,25	3,651	,9624	,8589	,5624	+7,5674
1175		———	7.8	1	30 52,00	3,019	,9243	,8207	,4799	—6,4917
1176		Ophiuchi	7	4	31 26,25	2,752	—7,9279	—8,8326	+0,4396	—7,2935
1177		———	8	3	32 7,96	2,753	,9165	,8327	,4398	—7,2805
1178		———	7.8	3	32 36,85	3,097	,8974	,8209	,4909	+6,2587
1179		Herculis	7.8	2	32 56,46	2,463	,9340	,8619	,3915	—7,5520
1180		Ophiuchi	8	3	34 35,20	2,845	,8714	,8273	,4541	—7,0905
1181		Ophiuchi	8	3	34 49,89	3,603	—7,8923	—8,8540	+0,5567	+7,4646
1182		———	7.8	2	34 56,44	3,231	,8617	,8246	,5093	+6,9476
1183		———	7	2	34 59,31	2,654	,8786	,8415	,4239	—7,3523
1184		Herculis	7	2	35 32,29	2,370	,9021	,8744	,3747	—7,5699
1185	83	———	6	2	35 45,14	2,458	,8858	,8630	,3906	—7,5060
1186		Draconis	8	3	36	—0,376	—8,2844	—9,2652	—9,5752	—8,2543
1187		Ophiuchi	8	3	36 14,24	+2,933	7,8381	8,8238	+0,4673	—6,8427
1188	61	———	*seq.* 7.8	4	36 21,34	3,007	7,8339	8,8221	,4781	—6,4988
1189		———	7.8	4	36 48,22	2,740	7,8376	8,8346	,4377	—7,2172
1190		Draconis	8	2	36 53,67	1,277	—8,0495	9,0465	,1062	—7,9542
1191		Ophiuchi	8.9	3	37 31,91	2,933	—7,8129	—8,8241	+0,4673	—6,8162
1192		———	7.8	1	38 8,84	2,935	,8010	,8241	,4676	—6,7993
1193		———	8.9	2	38 44,51	2,936	,7888	,8242	,4678	—6,7820
1194		———	8	2	39 0,46	2,934	,7834	,8243	,4675	—6,7842
1195		Telescopii	7	3	40 0,91	4,214	,8787	,9426	,6247	+7,6932
1196		Sagittarii	7	3	41 26,17	3,979	—7,8081	—8,9057	+0,5998	+7,5596
1197		———	8	5	42 1,99	3,545	,7383	,8488	,5496	+7,2664
1198		Tauri Pon.	8	3	42 38,43	2,897	,7024	,8262	,4619	—6,8064
1199		Herculis	7	4	42 38,54	1,949	,8165	,9386	,2898	—7,6248
1200		———	8		42	3,992	,7757	,9080	,6012	+7,5315
1201		Ophiuchi	9	2	43 43,35	3,522	—7,6932	—8,8467	+0,5468	+7,2021
1202		———	8	3	44 3,96	3,649	7,6868	8,8495	+ ,5501	+7,2177
1203	ψ^1	Draconis	*seq.* 7	3	44 53,95	—1,093	8,1588	9,3385	— ,0386	—8,1376
1204		Ophiuchi	8	3	45 3,53	+3,632	7,6675	8,8588	+ ,5601	+7,2585
1205		———	7	3	45 33,73	3,104	7,6159	8,8232	+ ,4919	+6,0527
1206		Serpentis	7.8	4	45 46,82	3,342	—7,6185	—8,8320	+0,5240	+6,9219
1207		Telescopii	7	3	46 9,03	4,256	,7238	8,9499	,6290	+7,5466
1208		Herculis	7.8		46	1,564	,7687	9,0013	,1942	—7,6427
1209		Serpentis	8	3	47 22,99	3,440	,5733	8,8397	,5366	+7,0043
1210		Ophiuchi	8	2	47 47,23	3,525	,5668	8,8474	,5472	+7,0772
1211		Tauri Pon.	7	3	47 57,07	2,947	—7,5396	—8,8251	+0,4694	—6,4955
1212		———	7	2	48 46,98	2,951	,5092	,8251	,4700	—6,4510
1213		Ophiuchi	7.8	1	49 11,74	3,472	,5079	,8425	,5406	+6,9697
1214		Herculis	7	2	49 13,11	2,625	,5115	,8461	,4191	—7,0096
1215		———	8	4	49 59,09	1,705	,6157	,9785	,2317	—7,4695

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	Logarithms of b′	Logarithms of c′	Logarithms of d′	Piazzi No.	Annual P. M. A.R.	Annual P. M. Decn.
		° ′ ″	″						s	″
1171	4	+11 47 33,18	−2,581	+9,7973	−8,4200	−0,4119	+9,9964	171	+,004	− ,02
1172	3	−11 10 1,20	2,564	+9,3692	+8,3940	,4089	,9964	170	+,014	− ,11
1173	2	+20 42 3,71	2,564	+9,8785	−8,6550	,4089	,9964	175	+,013	− ,01
1174	3	−23 44 20,86	2,524	−7,4771	+8,7051	,4020	,9965	173	+,012	− ,01
1175	3	+ 2 7 44,61	2,524	+9,6730	−7,6675	,4020	,9965	177	+,048	+ ,02
1176	3	+13 25 34,89	2,477	+9,8142	−8,4576	−1,3940	+9,9966	183	+,013	+ ,01
1177	2	+13 22 52,34	2,414	+9,8136	−8,4450	,3827	,9968	185	+,010	,00
1178	4	− 1 18 16,59	2,373	+9,6075	+7,4347	,3753	,9969	187	+,016	− ,06
1179	3	+24 30 33,58	2,350	+9,9069	−8,6871	,3711	,9970	191	+,014	− ,06
1180	3	+ 9 32 2,27	2,205	+9,7730	−8,2606	,3434	,9973	199	+,011	− ,14
1181	4	−21 56 30,42	2,176	+8,5051	+8,6081	−0,3377	+9,9974	197	−,006	− ,07
1182	4	− 6 59 48,99	2,170	+9,4914	+8,1205	,3365	,9974	202	+,014	− ,06
1183	2	+17 18 53,66	2,170	+9,8513	−8,5083	,3365	,9974	205	+,011	+ ,02
1184	2	+27 43 39,23	2,124	+9,9279	−8,6930	,3272	,9975	212	+,019	− ,06
1185	3	+24 39 4,61	2,101	+9,9079	−8,6406	,3224	,9976	213	+,002	− ,19
1186	1	+68 54 10,36	2,083	+0,0350	−8,9867	−0,3188	+9,9976	232		+ ,11
1187	1	+ 5 47 36,33	2,060	+9,7269	−8,0165	,3139	,9977	214	+,021	− ,08
1188	3	+ 2 39 21,59	2,049	+9,6803	−7,6745	,3115	,9977	216	−,001	− ,11
1189	3	+13 51 38,13	2,008	+9,8189	−8,3804	,3028	,9978	219	+,007	+ ,02
1190	3	+53 25 11,67	2,008	+0,0245	−8,9055	,3028	,9978	224	−,035	− ,14
1191	2	+ 5 47 22,99	1,944	+9,7259	−7,9901	−0,2887	+9,9979	222	+,016	− ,05
1192	3	+ 5 43 45,24	1,892	+9,7251	−7,9733	,2769	,9980	230	+,005	− ,19
1193	3	+ 5 38 0,80	1,840	+9,7243	−7,9560	,2648	,9982	234	+,017	− ,12
1194	3	+ 5 45 34,93	1,816	+9,7259	−7,9581	,2592	,9982	235	+,012	− ,10
1195	3	−40 42 49,14	1,724	−9,5065	+8,7489	,2364	,9984	236	+,009	− ,17
1196	4	−34 21 49,56	1,596	−9,3096	+8,6525	−0,2030	+9,9986	248	−,016	− ,03
1197	5	−19 43 18,59	1,549	+8,8573	+8,4163	,1901	,9987	251	+,015	− ,16
1198	4	+ 7 17 7,20	1,503	+9,7459	−7,9789	,1769	,9988	260	−,003	− ,05
1199	2	+40 1 55,72	1,509	+9,9881	−8,6850	,1786	,9988	262	+,008	− ,02
1200		−34 44	1,474	−9,3243	+8,6223	,1684	,9988	256		
1201	3	−18 49 45,28	1,404	+8,9494	+8,3543	−0,1473	+9,9989	263	+,026	+ ,09
1202	4	−19 50 34,56	1,375	+8,8388	+8,3672	,1383	,9990	264	+,002	− ,07
1203	2	+72 14 9,93	1,323	+0,0342	−8,7982	,1214	,9990	287	+,013	− ,27
1204	4	−22 56 23,95	1,287	+8,0414	+8,3988	,1098	,9991	268	+,004	+ ,04
1205	3	− 1 34 37,23	1,241	+9,6096	+7,2286	,0938	,9992	274	,000	− ,02
1206	3	−11 35 41,88	1,224	+9,3502	+8,0890	−0,0876	+9,9992	276	+,013	− ,04
1207	4	−41 40 57,42	1,189	−9,5315	+8,5959	,0751	,9992	272	+,006	− ,03
1208	1	+48 26 31,26	1,171	+0,0149	−8,6407	,0686	,9992	288		− ,04
1209	2	−15 39 6,88	1,084	+9,1732	+8,1640	,0350	,9994	284	+,002	− ,04
1210	2	−18 54 23,82	1,049	+8,9445	+8,2292	,0208	,9994	290	+,018	− ,06
1211	3	+ 5 11 34,62	1,037	+9,7177	−7,6698	−0,0159	+9,9994	299	+,005	− ,10
1212	3	+ 5 0 42,00	0,967	+9,7152	−7,6254	9,9856	,9995	296	+,010	− ,06
1213	4	−16 49 55,31	0,927	+9,1004	+8,1268	9,9669	,9995	297	+,006	− ,03
1214	3	+18 21 22,72	0,927	+9,8609	−8,1630	9,9569	,9995	300	+,015	− ,04
1215	3	+45 34 59,96	0,868	+0,0077	−8,4906	9,9387	,9996	306	+,024	+ ,03

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Precession.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	*s.*				
1216	Serpentis	7.8	3	17 50 21,03	+3,186	—7,4384	—8,8252	+0,5032	+6,3816
1217	Draconis	7.8	4	50 27,33	0,715	,7466	9,1303	9,8543	—7,6860
1218	Sagittarii	8	3	51 28,13	3,503	,4064	8,8456	0,5444	+6,8979
1219	———	7.8	3	52 35,65	3,670	,3571	,8638	,5647	+6,9706
1220	———	7·8	2	53 17,36	3,971	,3560	,9054	,5989	+7,1041
1221	Herculis	8	2	53 38,33	2,732	—7,2694	—8,8371	+0,4365	—6,6571
1222	Sagittarii	8.9		53	3,639	,2830	,8601	,5610	+6,8773
1223	Tauri Pon.	8·9	3	54 6,82	2,965	,2183	,8250	,4720	—6,1015
1224	Sagittarii	9	2	54 19,87	3,540	,2270	,8493	,5490	+6,7497
1225	Herculis	8	4	54 33,74	2,507	,2205	,8591	,3991	—6,8085
1226	Herculis	8	3	55 35,31	2,710	—7,1020	—8,8389	+0,4330	—6,5155
1227	Telescopii	7.8	2	55 49,24	4,332	7,1972	,9626	,6367	+7,0342
1228	Sagittarii	8	3	56 23,89	3,790	7,0423	,8795	,5786	+6,7192
1229	———	8	3	57 27,59	3,872	6,8861	,8909	,5879	+6,5982
1230	———	8.9	3	57 50,95	3,604	6,7824	,8563	,5568	+6,3535
1231	Tauri Pon.	7.8	2	58 13,48	2,747	—6,6800	—8,8360	+0,4389	—6,0476
1232	Sagittarii	7	2	58 48,79	3,594	6,4650	,8551	,5556	+6,0284
1233	———	7	2	59 4,27	3,723	6,3344	,8707	,5709	+5,9780
1234	Tauri Pon.	7.8	3	59 18,62	2,911	6,1937	,8269	,4640	—5,2607
1235	———	8	2	59 43,87	2,845	5,2936	,8299	,4541	+4,5105
1236	Sagittarii	9	2	18 0 6,52	3,657	+6,0252	—8,8625	+0,5631	—5,6311
1237	———	7.8	2	0 55,74	3,714	,5636	,8694	,5698	—6,2021
1238	100 Herculis *præc.*	6.7	5	1 13,01	2,414	,6565	,8705	,3827	+6,2996
1239	———	8	3	1 27,07	2,441	,7111	,8671	,3876	+6,3395
1240	Ophiuchi	8.9	3	1 59,57	2,785	,8157	,8334	,4448	+6,1317
1241	Herculis	7	4	2 54,21	2,283	+7,0147	—8,8881	+0,3585	+6,7194
1242	———	8	4	4 30,55	2,150	,2168	,9079	,3324	+6,9701
1243	Sagittarii	7.8	3	4 53,73	3,939	,2512	,9009	,5954	—6,9888
1244	———	8.9	4	5 5,02	3,664	,2301	,8632	,5640	—6,8399
1245	Tauri Pon.	7.8	4	6 13,54	2,847	,2757	,8296	,4544	+6,4888
1246	Sagittarii	8	3	7 29,20	4,085	+7,4513	—8,9229	+0,6112	—7,2336
1247	Tauri Pon.	7.8	4	9 22,23	2,784	,4525	,8331	,4447	+6,7709
1248	Cly. Sob.	8.9	4	9 34,29	3,469	,4736	,8423	,5402	—6,9324
1249	Sagittarii	7.8	3	9 53,38	4,152	,5793	,9335	,6183	—7,3790
1250	Tauri Pon.	7.8	2	10 14,53	2,789	,4899	,8328	,4454	+6,8012
1251	Cly. Sob.	8.9	3	11 46,99	3,462	+7,5608	—8,8414	+0,5393	—7,0125
1252	—— ——	8	2	11 51,51	3,462	,5632	,8414	,5393	—7,0149
1253	—— ——	8.9	3	12 8,66	3,733	,6051	,8714	,5721	—7,2544
1254	Sagittarii	7.8	3	13 10,52	3,982	,6762	,9066	,6001	—7,4282
1255	Draconis	8.9	1	14 29,91	—0,332	8,0613	9,2606	—9,5211	+8,0303
1256	Serpentis	7.8	4	15 21,44	3,096	+7,6548	—8,8230	+0,4908	—5,9818
1257	Tauri Pon.	7	3	17 4,39	2,951	,7022	,8243	,4700	+6,6425
1258	Sagittarii	8	3	18 50,47	3,693	,7867	,8656	,5674	—7,4148
1259	———	8	2	19 11,78	3,954	,8307	,9020	,5970	—7,5743
1260	———	8.9	3	19 13,87	3,953	,8319	,9017	,5969	—7,5749

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s.	″
1216	4	— 5 1 37,57	—0,823	+9,5366	+7,5560	—9,9148	+9,9996	305	+,012	— ,24
1217	2	+60 25 39,26	0,827	+0,0346	—8,5553	,9179	,9996	315	+,004	— ,09
1218	2	—18 3 28,05	0,728	+9,0128	+8,0521	,8625	,9997	308	—,007	,00
1219	3	—24 14 43,66	0,624	—8,1461	+8,1066	,7950	,9998	319	—,017	— ,01
1220	3	—34 2 51,10	0,566	—9,3010	+8,1986	,7524	,9998	325	+,019	,00
1221	2	+14 7 47,19	0,543	+9,8228	—7,8199	—9,7341	+9,9998	336	+,014	— ,12
1222	3	—23 7 53,96	0,530	+7,7781	+8,0170	,7247	,9998	330		,00
1223	2	+ 4 22 51,34	0,496	+9,7067	—7,2765	,6951	,9999	340	+,012	— ,29
1224	3	—19 27 21,19	0,476	+8,8808	+7,9003	,6795	,9999	338	+,002	— ,16
1225	4	+22 46 53,72	0,462	+9,8960	—7,9493	,6633	,9999	345	+,016	— ,02
1226	3	+15 0 13,35	0,367	+9,8312	—7,6765	—9,5650	+9,9999	350	+,019	— ,22
1227	3	—43 23 49,66	0,343	—9,5705	+8,0716	,5365	,9999	346	+,003	+ ,07
1228	3	—28 22 5,17	0,291	—8,9685	+7,8397	,4646	,9999	351	+,016	+ ,04
1229	3	—31 0 46,67	0,199	—9,1553	+7,7072	,2972	0,0000	355	+,019	— ,09
1230	4	—21 52 18,10	0,169	+8,4914	+7,4972	,2281	,0000	360	+,021	— ,03
1231	3	+13 28 34,18	0,140	+9,8162	—7,2116	—9,1459	+0,0000	363	—,020	— ,06
1232	3	—21 27 50,07	0,082	+8,5798	+7,1733	8,9118	,0000	364	+,006	— ,01
1233	3	—26 7 3,63	0,058	—8,6990	+7,1074	8,7657	,0000	365	,000	— ,27
1234	3	+ 6 41 31,00	0,046	+9,7388	—6,4338	8,6688	,0000	371	—,001	— ,07
1235	2	+ 9 28 45,97	0,006	+9,7730	—5,6806	7,7657	,0000	376	+,012	— ,22
1236	1	—23 47 30,02	+0,029	—7,7781	—6,7686	+8,4647	+0,0000	375	+,016	+ ,10
1237	3	—25 47 13,77	0,099	—8,6434	—7,3326	8,9961	,0000	383	+,014	— ,09
1238	3	+26 4 43,26	0,122	+9,9191	+7,4291	9,0879	,0000	389	+,017	+ ,07
1239	2	+25 9 20,63	0,140	+9,9127	+7,4723	9,1459	,0000	391	+,014	— ,17
1240	4	+11 56 48,48	0,192	+9,8007	+7,2983	9,2842	,0000	3	+,001	— ,20
1241	5	+30 26 17,31	0,268	+9,9445	+7,8311	+9,4284	+0,0000	6	+,016	— ,05
1242	3	+34 31 36,86	0,408	+9,9652	+8,0621	,6108	9,9999	13	+,010	— ,09
1243	4	—33 7 53,72	0,449	—9,2624	—8,0878	,6521	0,0000	9	+,012	— ,06
1244	4	—24 2 14,72	0,466	—8,0414	—7,9766	,6687	,0000	12	—,001	— ,01
1245	4	+ 9 24 1,78	0,558	+9,7716	+7,6590	,7479	9,9998	19	+,004	— ,19
1246	5	—37 16 34,15	0,677	—9,4150	—8,3104	+9,8301	+9,9997	22	—,002	— ,11
1247	4	+12 1 0,99	0,833	+9,8007	+7,9374	,9209	,9996	30	+,009	+ ,10
1248	3	—16 42 49,25	0,857	+9,1106	—8,0898	,9329	,9996	29	+,007	— ,08
1249	4	—39 4 55,46	0,886	—9,4669	—8,4451	,9474	,9996	28	+,005	— ,08
1250	4	+11 49 22,11	0,909	+9,7993	+7,9686	,9587	,9995	35	+,023	— ,08
1251	3	—16 26 30,25	1,049	+9,1271	—8,1704	+0,0208	+9,9994	38	+,011	— ,18
1252	4	—16 26 23,89	1,055	+9,1271	—8,1728	,0232	,9994	40	+,001	— ,07
1253	4	—26 29 5,63	1,084	—8,7559	—8,3823	,0350	,9994	41	+,012	— ,08
1254	4	—34 24 28,51	1,177	—9,3139	—8,5208	,0708	,9992	44	+,004	— ,11
1255	3	+68 35 1,40	1,305	+0,0362	+9,7688	,1019	,9991	61	—,054	+ ,08
1256	4	— 1 13 26,48	1,358	+9,6159	—7,1578	+0,1327	+9,9990	59	+,012	— ,09
1257	4	+ 4 59 57,85	1,508	+9,7152	+7,8169	,1786	,9988	65	+,013	— ,15
1258	4	—25 8 15,68	1,666	—8,4771	—8,5477	,2216	,9985	68	—,002	— ,20
1259	3	—33 38 41,69	1,695	—9,2810	—8,6707	,2291	,9984	69	+,028	— ,13
1260	4	—33 35 32,02	1,700	—9,2787	—8,6716	,2305	,9984	71	+,015	— ,01

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan 1, 1836.	Annual Preces-sion.	Logarithms of a	b	c	d
				h. m. s.	s				
1261	Serpentis	8.9	3	18 19 26,58	+3,066	+7,7569	—8,8223	+0,4866	+5,0657
1262	Herculis	7.8	3	19 53,80	2,408	,8134	,8699	,3817	+7,4608
1263	———	7.8	3	20 5,36	2,408	,8176	,8699	,3817	+7,4651
1264	Sagittarii	8	3	20 22,83	3,665	,8168	,8620	,5641	—7,4286
1265	———	7.8	3	21 38,53	3,933	,8794	,8985	,5947	—7,6159
1266	Cor. Aust.	8	5	22 4,50	4,138	+7,9204	—8,9302	+0,6168	—7,7175
1267	Sagittarii	7.8	2	23 19,86	3,933	,9126	,8983	,5947	—7,6495
1268	———	7.8	3	25 34,38	3,577	,9042	,8509	,5535	—7,4578
1269	———	7.8	3	25 37,51	3,477	,8952	,8408	,5412	—7,3636
1270	———	8.9	2	26 44,86	3,815	,9538	,8806	,5815	—7,6444
1271	Sagittarii	8.9	2	26 50,86	3,822	+7,9559	—8,8816	+0,5823	—7,6496
1272	Lyræ	8	2	27 14,17	2,003	8,0074	,9288	,3017	+7,8039
1273	Sagittarii	7.8	2	27 43,32	3,950	7,9893	,9001	,5966	—7,7325
1274	Cly. Sob.	8	3	28 49,63	3,242	7,9287	,8241	,5108	—7,0424
1275	Tauri Pon.	7.8	2	29 32,48	2,803	7,9433	,8287	,4476	+7,2348
1276	Tauri Pon.	7.8	5	29 39,85	2,805	+7,9451	—8,8286	+0,4479	+7,2341
1277	Sagittarii	8	3	30 28,75	3,854	8,0155	,8854	,5859	—7,7231
1278	Tauri Pon.	8	2	30 42,73	3,116	7,9531	,8202	,4936	—6,5171
1279	Cly. Sob.	8	3	31 34,50	3,412	7,9791	,8341	,5330	—7,3821
1280	Aquilæ	8	3	33 25,77	3,242	7,9931	,8229	,5108	—7,1078
1281	Cor. Aust.	7	1	33 35,52	4,173	+8,1068	—8,9340	+0,6204	—7,9137
1282	Tauri Pon.	7.8	3	33 51,07	2,784	,0042	8,8288	0,4447	+7,3256
1283	—— ——	7.8	5	34 12,39	2,784	,0084	8,8288	0,4447	+7,3304
1284	Draconis	7	3	35 41,53	0,192	,3948	9,1984	9,2833	+8,3533
1285	Tauri Pon.	7.8	3	35 59,66	2,872	,0254	8,8232	0,4582	+7,1934
1286	Draconis	7	2	36 4,49	0,545	+8,3521	—9,1524	+9,7364	+8,2996
1287	Antinoi	8.9	1	36 50,42	3,146	,0316	8,8190	0,4978	—6,8025
1288	———	7.8	3	37 14,48	3,216	,0374	8,8208	0,5073	—7,0857
1289	Draconis	8	3	38 12,02	0,411	,3963	9,1704	9,6138	+8,3486
1290	Lyræ	7	3	38 32,63	2,025	,1554	8,9233	0,3064	+7,9483
1291	Sagittarii	8.9	3	39 7,70	3,556	+8,0836	—8,8454	+0,5510	—7,6245
1292	Lyræ	8	3	39 10,43	2,152	,1421	8,9032	,3328	+7,8989
1293	Draconis	9.10	2	39 55,23	1,125	,3147	9,0684	,0511	+8,2327
1294	Sagittarii	7.8	3	40 25,15	3,737	,1206	8,8670	,5725	—7,7769
295	———	8	3	40 48,08	3,611	,1084	8,8511	,5576	—7,6903
1296	Antinoi	7	2	40 54,48	3,209	+8,0781	—8,8193	+0,5064	—7,1044
1297	Lyræ	8	3	41 17,74	2,355	,1343	8,8727	,3720	+7,8125
1298	Antinoi	8	3	41 57,24	3,299	,0918	8,8231	,5184	—7,3301
1299	———	8	3	42 20,35	3,217	,0927	8,8191	,5074	—7,1432
1300	Draconis	8	2	42 21,17	—1,174	,6164	9,3456	— ,0697	+8,5964
1301	Lyræ	7.8	3	42 21,59	+2,228	+8,1644	—8,8908	+0,3479	+7,8958
1302	Draconis	7	3	42 38,90	0,623	,4164	9,1414	9,7945	+8,3614
1303	Herculis	8.9	3	42 43,54	2,491	,1316	8,8546	0,3964	+7,7361
1304	Sagittarii	9	3	43 19,00	3,528	,1244	8,8413	0,5475	—7,6436
1305	Lyræ	8.9	3	44 3,67	2,211	,1837	8,8930	0,3446	+7,9217

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	Logarithms of b′	Logarithms of c′	Logarithms of d′	Piazzi No.	Annual P. M. A.R.	Annual P. M. Decn.
		° ′ ″	″						s	″
1261	4	+ 0 6 19,57	+1,718	+9,6395	+6,2418	+0,2350	+9,9984	77	+,008	— ,19
1262	3	+26 22 12,50	1,753	+9,9196	+8,5892	,2437	,9983	83	+,010	+ ,06
1263	5	+26 21 26,11	1,770	+9,9196	+8,5935	,2480	,9983	84	+,012	+ ,08
1264	4	—24 9 47,71	1,799	—8,0414	—8,5507	,2551	,9983	81	+,008	+ ,07
1265	5	—33 2 42,87	1,909	—9,2528	—8,7154	,2809	,9980	87	+,007	— ,01
1266	2	—38 49 42,20	1,950	—9,4564	—8,7852	+0,2900	+9,9979	90	+,002	— ,04
1267	2	—33 4 48,88	2,060	—9,2528	—8,7488	,3139	,9977	97	+,002	— ,09
1268	4	—20 57 41,65	2,251	+8,6902	—8,6042	,3525	,9972	110	+,029	— ,12
1269	4	—17 6 23,00	2,310	+9,0899	—8,5200	,3536	,9972	111	+,013	— ,16
1270	4	—29 21 50,11	2,356	—9,0374	—8,7607	,3721	,9970	117	+,009	— ,09
1271	3	—29 36 1,76	2,362	—8,1139	—8,7649	+0,3732	+9,9970	118	—,006	— ,05
1272	3	+38 44 43,21	2,385	+9,9818	+8,8720	,3774	,9969	126	+,028	— ,10
1273	4	—33 36 33,93	2,443	—9,2742	—8,8291	,3879	,9967	122	+,008	— ,02
1274	4	— 7 27 53,69	2,530	+9,4786	—8,2148	,4030	,9965	130	—,018	— ,03
1275		+11 17	2,587	+9,7924	+8,4024	,4128	,9963	133	+,007	
1276	4	+11 13 24,10	2,599	+9,7917	+8,4018	+0,4148	+9,9963	134	+,017	+ ,01
1277	3	—30 40 10,67	2,640	—9,1206	—8,8337	,4218	,9961	136	+,001	— ,22
1278	2	— 2 5 20,71	2,697	+9,5999	—7,6929	,4309	,9960	138	+,020	— ,08
1279	3	—14 39 0,39	2,772	+9,2304	—8,6438	,4428	,9958	140	+,012	— ,15
1280	4	— 7 29 12,86	2,934	+9,4786	—8,2802	,4674	,9953	152	+,017	— ,02
1281	4	—39 53 56,18	2,951	—9,4786	—8,9749	+0,4700	+9,9952	148	—,023	— ,42
1282	3	+12 5 14,69	2,968	+9,8000	+8,4920	,4725	,9952	154	+,009	+ ,05
1283	3	+12 6 19,59	2,997	+9,8007	+8,4968	,4767	,9951	156	+,013	— ,03
1284	4	+65 20 28,96	3,112	+0,0326	+9,1496	,4931	,9947	173	+,009	— ,08
1285	4	+ 8 28 4,57	3,149	+9,7589	+8,3642	,4982	,9946	163	+,011	— ,10
1286	2	+62 22 43,68	3,135	+0,0318	+9,1418	+0,4963	+9,9946	174	+,054	+ ,04
1287	4	— 3 23 36,30	3,227	+9,5740	—7,9779	,5089	,9943	168	+,002	— ,06
1288	3	— 6 25 0,97	3,256	+9,5065	—8,2590	,5127	,9942	171	+,019	— ,14
1289	4	+63 38 22,03	3,325	+0,0318	+9,1721	,5218	,9939	190	—,012	— ,04
1290	4	+38 22 6,93	3,371	+9,9786	+9,0187	,5278	,9938	182	—,009	— ,05
1291	4	—20 19 41,13	3,417	+8,8129	—8,7726	+0,5337	+9,9936	180	+,018	— ,14
1292	3	+34 50 24,69	3,423	+9,9633	+8,9892	,5344	,9936	188	—,006	— ,06
1293		+55 53	3,480	+0,0245	+9,1576	,5416	,9933	198	+,047	
1294	3	—26 56 58,53	3,538	—8,7708	—8,9031	,5487	,9931	191	+,010	— ,14
1295	3	—22 26 48,43	3,567	+8,3979	—8,8322	,5522	,9930	194	,000	— ,01
1296	2	— 6 5 29,16	3,578	+9,5132	—8,2781	+0,5536	+9,9930	197	+,012	— ,06
1297	2	+28 28 4,28	3,601	+9,9294	+8,9326	,5564	,9929	200	+,003	— ,06
1298	3	— 9 57 32,51	3,658	+9,4099	—8,4995	,5633	,9926	201	+,005	— ,15
1299	3	— 6 27 49,03	3,698	+9,5065	—8,3166	,5680	,9925	204	+,010	— ,02
1300	2	+72 47 49,95	3,675	+0,0282	+9,2435	,5653	,9926	221	+,001	— ,01
1301	2	+32 35 55,53	3,707	+9,9518	+8,9974	+0,5690	+9,9925	207	+,005	— ,08
1302	2	+61 46 1,66	3,710	+0,0298	+9,2124	,5694	,9924	212	—,009	+ ,10
1303	2	+23 42 51,03	3,727	+9,8987	+8,8739	,5714	,9924	209	+,017	— ,08
1304	3	—19 18 33,29	3,779	+8,9294	—8,7946	,5773	,9921	208	+,019	— ,05
1305	2	+33 9 56,67	3,842	+9,9542	+9,0206	,5845	,9919	216	+,015	— ,05

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a	b	c	d
				h. m. s.	s.				
1306	Sagittarii	8	3	18 45 1,95	+3,806	+8,1766	—8,8753	+0,5805	—7,8675
1307	Lyræ	8	2	47 16,95	1,826	,2760	,9541	,2615	+8,1139
1308	Herculis	7.8	4	47 23,25	2,588	,1651	,8420	,4130	+7,7026
1309	Lyræ	8	2	47 59,94	1,827	,2819	,9538	,2617	+8,1199
1310	Serpentis	6.7	1	48 10,53	3,016	,1451	,8145	,4794	+6,7422
1311	o Draconis *pr.*	8.9	3	48 45,46	0,877	+8,4395	—9,1047	+9,9430	+8,3735
1312	Sagittarii	8.9	2	49 42,27	3,769	,2138	8,8687	0,5762	—7,8892
1313	Aquilæ	8	4	51 2,88	3,137	,1705	,8136	,4965	—6,8965
1314	Sagittarii	8	4	51 28,40	3,633	,2112	,8502	,5603	—7,8111
1315	Aquilæ	7.8	3	51 45,64	2,721	,1903	,8275	,4347	+7,6010
1316	Aquilæ	8.9	3	52 28,84	2,727	+8,1958	—8,8268	+0,4357	+7,5998
1317	Antinoi *pr.*	8	5	54 18,10	3,089	,1958	,8116	,4898	—6,4077
1318	——— *seq*	8	2	54 19,08	3,090	,1963	,8116	,4900	—6,4159
1319	Sagittarii	8.9	3	54 46,38	3,674	,2427	,8541	,5651	—7,8692
1320	Lyræ	8.9	3	54 47,74	1,689	,3629	,9754	,2276	+8,2252
1321	Aquilæ	8.9	3	55 32,37	3,091	+8,2056	—8,8110	+0,4901	—6,4546
1322	———	8	3	55 56,41	2,859	,2142	,8163	,4562	+7,4156
1323	Sagittarii	8	3	56 5,89	3,743	,2622	,8628	,5732	—7,9269
1324	Lyræ	8.9	3	56 30,08	2,071	,3131	,9115	,3162	+8,0984
1325	Aquilæ	7	3	57 20,44	2,854	,2249	,8159	,4554	+7,4380
1326	Aquilæ	8	3	57 57,18	2,851	+8,2295	—8,8158	+0,4550	+7,4486
1327	Lyræ	7	4	58 39,01	2,307	,2930	,8741	,3630	+7,9985
1328	———	7.8	1	58 45,95	2,063	,3315	,9121	,3145	+8,1195
1329	———	8	2	59 13,81	2,041	,3391	,9156	,3098	+8,1332
1330	Aquilæ	7.8	3	59 24,99	2,934	,2364	,8114	,4675	+7,2496
1331	Antinoi	8.9	3	59 30,54	3,195	+8,2371	—8,8111	+0,5045	—7,2252
1332	Sagittarii	8	3	59 31,89	3,737	,2870	,8605	,5725	—7,9495
1333	Lyræ	8.9	1	59 41,35	1,602	,4154	,9888	,2047	+8,2907
1334	Vulpeculæ	7.8	2	19 0 18,45	2,594	,2677	,8361	,4140	+7,8056
1335	Draconis	7.8	2	0 54,74	0,596	,5786	9,1435	9,7752	+8,5264
1336	Aquilæ	8	3	0 56,63	2,860	+8,2504	—8,8138	+0,4564	+7,4502
1337	Sagittarii	7.8	2	1 37,07	3,552	,2786	,8366	,5505	—7,8249
1338	Lyræ	8	3	2 39,54	2,030	,3651	,9163	,3075	+8,1631
1339	———	7	2	2 52,64	2,076	,3590	,9087	,3172	+8,1449
1340	———	7.8	3	3 2,54	2,316	,3227	,8710	,3647	+8,0256
1341	Aquilæ	8.9	2	3 3,30	2,892	+8,2630	—8,8112	+0,4612	+7,3956
1342	Sagittarii	8.9	2	3 26,43	3,553	,2910	,8359	,5506	—7,8390
1343	———	8	3	3 47,83	3,609	,2997	,8422	,5574	—7,8886
1344	———	8.9	3	4 50,41	3,489	,2930	,8284	,5427	—7,7869
1345	Vulpeculæ	8	2	4 51,44	2,429	,3189	,8543	,3854	+7,9679
1346	Lyræ	7.8		5	2,338	+8,3334	—8,8669	+0,3688	+8,0275
1347	Sagittarii	8	2	5 46,66	3,536	,3044	,8328	,5485	—7,8399
1348	Aquilæ	7	3	6 14,29	2,899	,2840	,8091	,4622	+7,3997
1349	Sagittarii	7.8	2	6 22,69	3,414	,2963	,8206	,5333	—7,7121
1350	Aquilæ	8	3	6 58,76	2,864	,2899	,8104	,4570	+7,4866

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of				Piazzi No.	Annual P. M.	
				a′	b′	c′	d′		A. R.	Decn.
		° ′ ″	″						s.	″
1306	5	—29 24 41,86	+3,933	—9,0128	—8,9838	+0,5947	+9,9915	217	+,014	— ,03
1307	3	+43 30 47,62	4,116	+9,9952	+9,1604	,6145	,9904	235	+,020	— ,04
1308	4	+20 9 26,11	4,127	+9,8716	+8,8512	,6157	,9906	234	+,025	— ,11
1309	6	+43 30 55,04	4,173	+9,9948	+9,1564	,6204	,9904	244	+,014	— ,09
1310	4	+ 2 15 55,08	4,196	+9,6749	+7,9180	,6228	,9903	241	+,020	— ,10
1311	3	+59 11 50,16	4,236	+0,0261	+9,2589	+0,6269	+9,9901	248	—,002	— ,09
1312	4	—28 15 56,44	4,332	—8,9031	—9,0102	,6367	,9896	246	+,018	+ ,06
1313	4	— 3 3 9,37	4,446	+9,5821	—8,0720	,6480	,9890	251	+,010	— ,01
1314	2	—23 27 0,43	4,486	+8,0000	—8,9497	,6519	,9888	253	+,017	+ ,02
1315	4	+14 54 35,95	4,503	+9,8261	+8,7622	,6535	,9887	259	+,021	— ,22
1316	4	+14 41 22,49	4,565	+9,8241	+8,7615	+0,6595	+9,9884	263	+,013	— ,20
1317	5	— 0 56 11,29	4,719	+9,6212	—7,5837	,6738	,9876	274	+,007	— ,20
1318	3	— 0 56 31,08	4,724	+9,6212	—7,5919	,6743	,9876	275	+,006	— ,10
1319	4	—25 3 7,61	4,764	—8,2553	—9,0025	,6780	,9874	277	+,003	— ,17
1320	4	+46 43 43,82	4,753	+0,0017	+9,2372	,6769	,9874	285	+,002	— ,06
1321	4	— 1 1 47,46	4,826	+9,6201	—7,6307	+0,6836	+9,9870	284	+,010	— ,12
1322	4	+ 9 8 2,38	4,860	+9,7649	+8,5861	,6867	,9868	288	+,010	— ,10
1323	3	—27 31 57,53	4,877	—8,7993	—9,0508	,6882	,9867	286	+,010	— ,09
1324	3	+37 34 39,83	4,900	+9,9708	+9,1735	,6902	,9866	296	+,007	— ,12
1325	4	+ 9 24 1,60	4,979	+9,7679	+8,6082	,6971	,9862	297	+,018	— ,09
1326	3	+ 9 31 37,60	5,030	+9,7694	+8,6187	+0,7015	+9,9859	304	—,001	— ,16
1327	3	+30 29 26,68	5,086	+9,9370	+9,1099	,7064	,9855	309	+,008	— ,11
1328	3	+37 51 48,97	5,092	+9,9717	+9,1929	,7069	,9855	311	+,040	— ,12
1329	2	+38 29 51,92	5,137	+9,9740	+9,2029	,7107	,9852	317	+,005	— ,11
1330	2	+ 5 54 47,96	5,154	+9,7259	+8,4233	,7121	,9851	314	+,012	,00
1331	2	— 5 35 2,78	5,161	+9,5289	—8,3992	+0,7131	+9,9851	313	+,009	— ,15
1332	2	—27 22 0,78	5,171	—8,7708	—9,0740	,7135	,9850	310	+,011	+ ,02
1333	3	+48 37 19,14	5,171	+0,0052	+9,2869	,7135	,9850	319	+,004	— ,01
1334	4	+20 10 53,02	5,227	+9,8692	+8,9541	,7182	,9847	320	+,024	— ,25
1335	2	+62 27 45,16	5,266	+0,0241	+9,3673	,7215	,9845	6	+,008	+ ,06
1336	2	+ 9 6 42,21	5,283	+9,7642	+8,6208	+0,7229	+9,9844	322	—,001	— ,06
1337	4	—20 36 30,10	5,345	+8,8261	—8,9723	,7280	,9840	324	+,012	— ,11
1838	4	+38 53 49,52	5,424	+9,9740	+9,2303	,7343	,9835	11	—,008	— ,05
1339	2	+37 39 8,65	5,440	+9,9694	+9,2196	,7356	,9834	13	—,019	— ,18
1340	3	+30 18 18,49	5,458	+9,9345	+9,1373	,7370	,9833	14	+,006	— ,13
1341	4	+ 7 47 50,14	5,457	+9,7497	+8,5676	+0,7370	+9,9833	9	+,015	+ ,41
1342	4	—20 41 24,23	5,497	+8,8195	—8,9861	,7401	,9830	10	—,004	— ,11
1343	4	—22 50 4,56	5,525	+8,4150	—9,0292	,7423	,9828	12	+,007	+ ,02
1344	4	—18 10 22,11	5,609	+9,0531	—8,9407	,7489	,9823	18	+,006	+ ,02
1345	4	+26 28 13,44	5,609	+9,9117	+9,0959	,7489	,9823	23	+,009	— ,02
1346	4	+29 37 17,05	5,631	+9,9299	+9,1427	+0,7506	+9,9821	26		— ,12
1347	4	—20 3 50,20	5,693	+8,8976	—8,9888	,7553	,9817	25	+,013	— ,24
1348	3	+ 7 29 19,88	5,731	+9,7443	+8,5720	,7583	,9815	29	+,008	,00
1349	3	—15 7 1,02	5,743	+9,2279	—8,8730	,7591	,9814	28	+,001	— ,11
1350	3	+ 9 2 27,59	5,788	+9,7634	+8,6572	,7625	,9811	31	+,027	+ ,09

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	s.				
1351	Sagittarii	8.9	3	19 7 30,31	+3,568	+8,3191	—8,8355	+0,5524	—7,8802
1352	Antinoi	9	2	7 42,02	3,134	,2896	,8051	,4961	—6,9986
1353	———	7	3	7 45,86	3,322	,2982	,8129	,5214	—7,5885
1354	Aquilæ	9.10	2	8 16,54	2,864	,2982	,8097	,4570	+7,4949
1355	———	7.8	3	8 34,36	2,927	,2970	,8067	,4664	+7,3385
1356	Antinoi	8	2	8 48,74	3,064	+8,2960	—8,8039	+0,4863	+5,8737
1357	Sagittarii	7.8	3	8 54,89	3,506	,3210	,8280	,5448	—7,8325
1358	Antinoi	8	2	9 5,07	3,333	,3072	,8129	,5228	—7,6154
1359	Aquilæ	10	1	9 13,43	2,864	,3039	,8091	,4570	+7,5014
1360	Sagittarii	7.8	2	9 35,87	4,101	,4109	,9131	,6129	—8,2101
1361	Antinoi	8	3	9 54,64	3,321	+8,3112	—8,8116	+0,5213	—7,6002
1362	Aquilæ	7	3	10 17,07	2,960	,3064	,8046	,4713	+7,2335
1363	Sagittarii	7.8	3	10 43,41	3,648	,3490	,8437	,5620	—7,9667
1364	Lyræ	7.8	3	12 2,20	2,344	,3761	,8630	,3700	+8,0706
1365	Aquilæ	7.8	3	12 12,85	2,969	,3175	,8032	,4726	+7,2106
1366	Aquilæ	8	3	12 25,03	3,009	+8,3178	—8,8022	+0,4784	+6,9828
1367	———	8.9	3	12 36,28	2,927	,3212	,8043	,4664	+7,3650
1368	Antinoi	7.8	2	12 38,13	3,101	,3190	,8017	,4915	—6,7272
1369	Sagittarii	8	2	13 0,34	3,513	,3464	,8265	,5457	—7,8659
1370	Antinoi	9.10	2	13 25,30	3,209	,3258	,8038	,5064	—7,3684
1371	Draconis	7.8	2	13 47,56	0,352	+8,6980	—9,1748	+9,5465	+8,6553
1372	Anseris	8	3	13 54,27	2,559	,3583	8,8333	0,4081	+7,9302
1373	Antinoi	8	2	13 57,78	3,066	,3261	8,8008	0,4866	+5,4888
1374	———	7	3	14 6,61	3,314	,3353	8,8087	0,5203	—7,6159
1375	Draconis	9	1	14 32,10	0,573	,6732	9,1449	9,7581	+8,6235
1376	Sagittarii	8	2	14 54,67	3,509	+8,3567	—8,8251	+0,5452	—7,8744
1377	Aquilæ	8	2	14 59,66	2,883	,3367	,8047	,4598	+7,4961
1378	Antinoi	8	3	15 25,15	3,283	,3405	,8060	,5163	—7,5641
1379	Sagittarii	7.8	3	16 5,62	3,402	,3531	,8141	,5317	—7,7613
1380	Aquilæ	8	2	16 35,76	3,034	,3411	,7992	,4820	+6,7638
1381	Antinoi	8 9	3	16 49,29	3,157	+8,3431	—8,8000	+0,4993	—7,1921
1382	———	8	3	17 6,15	3,121	,3442	,7991	,4943	—6,9631
1383	Anseris	7	3	17 33,99	2,618	,3720	,8244	,4180	+7,8983
1384	Cygni	7	2	18 12,65	2,148	,4420	,8909	,3320	+8,2128
1385	Aquilæ	8.9	3	18 51,30	3,119	,3534	,7979	,4940	—6,9632
1386	Cygni	7.8	2	19 9,43	2,489	+8,3963	—8,8392	+0,3960	+8,0182
1387	Anseris	7	2	19 18,18	2,621	,3810	,8231	,4185	+7,9063
1388	Sagittarii	8	2	19 59,08	3,566	,3911	,8285	,5522	—7,9581
1389	Cygni	7.8	3	20 3,56	2,161	,4503	,8881	,3316	+8,2181
1390	Aquilæ	6.7	3	20 6,83	3,010	,3601	,7971	,4786	+7,0196
1391	Cygni	7.8	3	20 14,44	1,576	+8,5510	—8,9880	+0,1976	+8,4348
1392	———	8	4	21 47,00	2,152	,4610	8,8887	,3328	+8,2323
1393	———	8	3	22 29,48	2,414	,4241	8,8475	,3827	+8,0899
1394	Draconis	7	3	22 48,47	1,091	,6448	9,0670	,0378	+8,5718
1396	Cygni	8		23	1,587	,5612	8,9854	,2006	+8,4473

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a′	Logarithms of b′	Logarithms of c′	Logarithms of d′	Piazzi No.	Annual P. M. A.R.	Annual P. M. Decn.
		° ′ ″	″						s.	″
1351	3	—21 21 19,05	+5,838	+8,7482	—9,0255	+0,7662	+9,9807	32	+,012	— ,04
1352	3	— 2 56 49,60	5,849	+9,5843	—8,1742	,7671	,9807	34	+,017	+ ,01
1353	3	—11 15 20,23	5,860	+9,3802	—8,7598	,7679	,9806	33	+,027	— ,05
1354	3	+ 9 2 40,16	5,899	+9,7627	+8,6655	,7708	,9803	40	+,008	— ,07
1355	2	+ 6 18 48,07	5,921	+9,7292	+8,5119	,7724	,9802	44	+,014	— ,03
1356	2	+ 0 12 40,90	5,944	+9,6415	+7,0498	+0,7741	+9,9800	46	+,003	— ,17
1357	3	—18 59 7,35	5,955	+9,0000	—8,9844	,7749	,9799	43	+,022	— ,01
1358	2	—11 44 5,51	5,972	+9,3636	—8,7824	,7761	,9798	47	+,001	— ,05
1359		+ 9 3	5,977	+9,7627	+8,6720	,7765	,9798	49	+,018	
1360	2	—39 2 22,03	6,016	—9,4216	—9,2765	,7793	,9795	48	+,001	— ,11
1361	3	—11 13 15,50	6,038	+9,3820	—8,7679	+0,7809	+9,9793	53	+,015	— ,01
1362	3	+ 4 50 17,52	6,066	+9,7101	+8,4080	,7829	,9791	58	+,019	— ,17
1363	3	—24 30 4,94	6,111	+5,8451	—9,1018	,7861	,9788	59	+,030	— ,26
1364	2	+29 39 41,07	6,211	+9,9289	+9,1857	,7931	,9781	78	—,002	— ,16
1365	3	+ 4 29 0,23	6,227	+9,7050	+8,3853	,7943	,9780	75	+,013	— ,28
1366	3	+ 2 38 17,51	6,244	+9,6785	+8,1584	+0,7954	+9,9778	76	+,007	— ,07
1367	3	+ 6 20 55,84	6,260	+9,7292	+8,5384	,7966	,9777	80	—,003	— ,08
1368	3	— 1 28 36,12	6,266	+9,6128	—7,9032	,7970	,9777	79	+,017	— ,09
1369	3	—13 19 36,08	6,299	+8,9777	—9,0168	,7993	,9774	82	+,020	+ ,04
1370	2	— 6 21 4,95	6,326	+9,5132	—8,5418	,8012	,9772	83	+,006	— ,26
1371	2	+64 58 48,48	6,343	+0,0183	+9,4575	+0,8023	+9,9771	98	+,015	— ,07
1372		+21 53	6,365	+9,8791	+9,0735	,8038	,9769	88	+,014	
1373	2	+ 0 4 28,05	6,373	+9,6385	+6,6649	,8043	,9769	87	+,012	— ,09
1374	3	—11 0 38,73	6,388	+9,3892	—8,7840	,8053	,9767	86	+,013	— ,10
1375	3	+63 5 52,99	6,409	+0,0174	+9,4551	,8068	,9766	101	+,019	— ,01
1376	3	—19 14 18,20	6,454	+8,9912	—9,0256	+0,8098	+9,9762	92	+,002	— ,01
1377	2	+ 8 17 56,74	6,459	+9,7528	+8,6676	,8102	,9762	95	+,004	— ,10
1378	1	— 9 38 58,28	6,492	+9,4314	—8,7340	,8124	,9759	97	+,018	— ,24
1379	3	—14 50 29,21	6,553	+9,2480	—8,9227	,8164	,9754	100	+,013	— ,13
1380	2	+ 1 31 14,14	6,591	+9,6618	+7,9397	,8190	,9751	106	+,014	+ ,06
1381	4	— 4 2 53,95	6,608	+9,5647	—8,3671	+0,8201	+9,9750	109	—,011	— ,16
1382	5	— 2 22 44,66	6,636	+9,5966	—8,1388	,8219	,9748	111	+,014	— ,11
1383	3	+19 37 18,66	6,669	+9,8609	+9,0484	,8240	,9745	116	+,014	— ,03
1384	4	+36 7 56,60	6,718	+9,9571	+9,2960	,8272	,9741	121	—,001	+ ,08
1385	3	— 2 20 39,06	6,778	+9,5977	—8,1389	,8311	,9736	122	+,013	— ,09
1386	3	+24 43 49,73	6,800	+9,8965	+9,1524	+0,8325	+9,9734	127	+,007	— ,14
1387	1	+19 34 11,94	6,811	+9,8603	+9,0565	,8332	,9733	128	+,002	— ,24
1388	2	—21 40 4,21	6,877	+8,7559	—9,1024	,8374	,9728	130	+,005	— ,01
1389	3	+35 51 45,21	6,872	+9,9552	+9,3029	,8371	,9728	134	+,019	— ,10
1390	2	+ 2 36 9,55	6,882	+9,6785	+8,1952	,8377	,9727	133	+,003	— ,09
1391	3	+49 55 10,35	6,882	+9,9992	+9,4196	+0,8377	+9,9727	140	+,012	— ,26
1392	4	+36 11 58,72	7,014	+9,9557	+9,3153	,8460	,9716	149	,000	,00
1393	3	+27 35 40,94	7,074	+9,9133	+9,2135	,8497	,9711	15[illegible]	+,007	— ,08
1394	4	+57 41 55,92	7,090	+0,0099	+9,4757	,8507	,9710	156	+,004	— ,03
1395	2	+49 48 40,10	7,063	+9,9978	+9,4301	,8490	,9712	154		— ,10

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Precession.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	*s.*				
1396	Sagittarii	8	2	19 24 1,95	+3,496	+8,4037	—8,8181	+0,5436	—7,9153
1397	Albireo *seq.*	7	5	24 8,80	2,415	,4321	8,8465	,3829	+8,0985
1398	Cygni	7.8	3	24 36,73	1,376	,6088	9,0205	,1386	+8,5147
1399	———	8	3	24 50,84	2,165	,4746	8,8848	,3355	+8,2428
1400	———	7.8	2	25 30,31	2,408	,4402	8,8466	,3817	+8,1108
1401	Anseris	8	2	25 52,61	2,599	+8,4172	—8,8214	+0,4148	+7,9649
1402	Antinoi	8	4	26 47,70	3,302	,4004	8,7995	,5188	—7,6698
1403	Aquilæ	8	3	26 52,84	2,982	,3941	8,7928	,4745	+7,2341
1404	Cygni	7.8	1	27 10,86	1,243	,6442	9,0418	,0945	+8,5618
1405	———	9		27	1,280	,6388	9,0357	,1072	+8,5535
1406	Aquilæ	7.8	3	27 36,81	3,073	+8,3965	—8,7912	+0,4874	—6,0064
1407	Antinoi	7.8	2	27 37,46	3,070	,3965	,7912	,4871	—5,6384
1408	———	8	3	27 38,36	3,136	,3975	,7918	,4964	—7,1375
1409	———	8	2	27 47,18	3,304	,4052	,7988	,5190	—7,6773
1410	Aquilæ	8	3	28 46,70	2,912	,4056	,7937	,4642	+7,5036
1411	Antinoi	8	1	28 51,22	3,086	+8,4025	—8,7903	+0,4894	—6,5738
1412	———	7.8	3	29 8,40	3,078	,4037	,7901	,4883	—6,3298
1413	———	8	3	29 46,99	3,086	,4065	,7896	,4894	—6,5778
1414	———	8	3	29 58,31	3,068	,4074	,7894	,4869	—4,8711
1415	Cygni	7	2	30 4,70	2,208	,4935	,8752	,3440	+8,2505
1416	Cygni	6	2	30 5,05	1,550	+8,6074	—8,9895	+0,1903	+8,4927
1417	Sagittarii	7.8	2	30 30,22	3,539	,4397	,8186	,5489	—7,9924
1418	———	9	2	30 30,85	3,608	,4483	,8272	,5573	—8,0525
1419	Aquilæ	8	2	30 39,02	2,937	,4128	,7913	,4679	+7,4368
1420	———	8	2	30 39,41	2,911	,4142	,7923	,4640	+7,5152
1421	Aquilæ	7.8	2	30 51,67	2,806	+8,4209	—8,7983	+0,4481	+7,7388
1422	Antinoi	9	1	30 53,80	3,107	,4118	8,7889	+0,4923	—6,9169
1423	———	8	2	31 12,05	3,248	,4180	8,7930	+0,5116	—7,5792
1424	Draconis	7.8	1	31 37,33	—0,170	,8633	9,2376	—9,2304	+8,8340
1425	Aquilæ	8	2	31 42,41	+2,907	,4189	8,7917	+0,4634	+7,5327
1426	Aquilæ	8	4	32 1,29	2,913	+8,4201	—8,7912	+0,4643	+7,5182
1427	Sagittarii	7.8	2	32 44,40	3,896	,5017	,8686	,5906	—8,2495
1428	———	8	3	32 50,89	2,680	,4409	,8078	,4281	+7,9198
1429	Sagittæ	9	1	33 38,64	2,678	,4446	,8073	,4278	+7,9255
1430	———	8	3	34 5,55	2,674	,4471	,8074	,4272	+7,9328
1431	Antinoi	8.9	2	34 9,09	3,307	+8,4342	—8,7942	+0,5194	—7,7167
1432	Cygni	7.8	3	34 18,09	2,331	,4934	,8531	,3675	+8,2057
1433	Antinoi	8	3	34 27,52	2,970	,4286	,7872	,4728	+7,3296
1434	Aquilæ	7.8	2	34 50,35	2,896	,4332	,7897	,4618	+7,5767
1435	Antinoi	8		35	3,318	,4416	,7937	,5209	—7,7437
1436	Sagittæ	8.9	2	35 18,86	2,670	+8,4528	—8,8069	+0,4265	+7,9432
1437	———	8.9	4	35 28,19	2,680	,4526	,8047	,4281	+7,9332
1438	Aquilæ	8.9	3	36 17,69	2,914	,4386	,7877	,4645	+7,5377
1439	———	8	2	36 25,08	2,809	,4454	,7937	,4486	+7,7632
1440	———			36 46,72	2,888	,4418	,7885	,4606	+7,6038

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a′	Logarithms of b′	Logarithms of c′	Logarithms of d′	Piazzi No.	Annual P. M. A. R.	Annual P. M. Decn.
		° ′ ″	″						s	″
1396	4	−18 57 33,53	+7,205	+9,0334	−9,0672	+0,8576	+9,9700	155	+,026	− ,11
1397	4	+27 37 32,23	7,205	+9,9127	+9,2220	,8576	,9700	162	+,012	− ,03
1398	4	+53 38 0,16	7,243	+0,0030	+9,4638	,8599	,9696	167	+,022	− ,02
1399	3	+35 53 16,07	7,264	+9,9533	+9,3274	,8612	,9694	164	+,010	+ ,02
1400	3	+27 55 18,17	7,319	+9,9133	+9,2331	,8644	,9689	169	+,009	− ,02
1401	3	+20 39 23,98	7,351	+9,8645	+9,1121	+0,8664	+9,9686	172	+,005	− ,08
1402	3	−10 43 10,79	7,427	+9,4048	−8,8383	,8708	,9679	177	+,012	− ,01
1403	3	+ 3 57 32,84	7,433	+9,6964	+8,4091	,8711	,9679	178	+,011	− ,15
1404	2	+55 47 25,36	7,449	+0,0052	+9,4877	,8721	,9677	189	+,013	− ,01
1405	1	+55 14 27,35	7,460	+0,0043	+9,4854	,8727	,9676	190		− ,24
1406	2	− 0 14 54,50	7,492	+9,6345	−7,1825	+0,8746	+9,9673	182	+,019	− ,39
1407	2	− 0 6 26,83	7,492	+9,6345	−6,8145	,8746	,9673	183	+,011	− ,18
1408	3	− 3 9 45,02	7,498	+9,5832	−8,3129	,8749	,9673	181	+,016	− ,12
1409	2	−10 47 20,89	7,508	+9,4031	−8,8456	,8755	,9672	185	−,010	− ,37
1410	2	+ 7 11 31,52	7,590	+9,7380	+8,6763	,8802	,9664	195	+,006	+ ,03
1411	4	− 0 51 9,96	7,595	+9,6243	−7,7498	+0,8805	+9,9663	194	+,005	− ,04
1412	3	− 0 29 32,64	7,616	+9,6304	−7,5059	,8817	,9661	198	+,003	− ,08
1413	3	− 0 51 11,69	7,665	+9,6232	−7,7538	,8845	,9657	200	+,015	− ,04
1414	3	− 0 1 17,05	7,681	+9,6375	−6,0472	,8854	,9655	202	+,015	− ,16
1415	1	+34 51 6,91	7,686	+9,9464	+9,3407	,8857	,9655	207	+,008	− ,12
1416	2	+50 53 16,12	7,681	+9,9961	+9,4732	+0,8854	+9,9655	211	+,017	− ,14
1417	2	−20 55 0,42	7,730	+8,8808	−9,1389	,8881	,9650	205	+,007	− ,15
1418	2	−23 41 57,00	7,730	+8,4150	−9,1903	,8881	,9650	204	+,003	+ ,02
1419		+ 6 3	7,735	+9,7234	+8,6105	,8884	,9650	208	+,016	
1420	1	+ 7 14 56,41	7,740	+9,7372	+8,6878	,8887	,9649	209	+,008	− ,01
1421	2	+11 59 31,18	7,751	+9,7896	+8,9053	+0,8894	+9,9648	212	+,020	− ,05
1422	1	− 1 50 9,34	7,756	+9,6074	−8,0927	,8897	,9648	210	+,014	− ,10
1423	2	− 8 20 25,29	7,789	+9,4698	−8,7506	,8915	,9644	213	+,012	− ,17
1424	2	+69 10 17,53	7,800	+0,0065	+9,5609	,8921	,9643	227	−,015	− ,09
1425	2	+ 7 28 21,95	7,821	+9,7404	+8,7050	,8932	,9641	216	+,011	− ,01
1426	3	+ 7 11 44,72	7,848	+9,7372	+8,6908	+0,8947	+9,9639	217	+,008	− ,05
1427	3	−34 1 28,60	7,912	−9,1875	−9,3441	,8983	,9632	218	+,017	− ,06
1428	2	+17 31 29,96	7,912	+9,8395	+9,0752	,8983	,9632	225	+,010	− ,17
1429	3	+17 37 4,56	7,976	+9,8395	+9,0808	,9018	,9626	228	+,004	− ,07
1430	3	+17 48 56,65	8,013	+9,8414	+9,0875	,9038	,9622	234	+,011	− ,20
1431	4	−11 3 14,51	8,019	+9,3979	−8,8847	+0,9041	+9,9621	231	+,025	− ,19
1432	3	+31 1 48,76	8,024	+9,9268	+9,3147	,9044	,9621	239	+,013	+ ,03
1433	2	+ 4 34 21,08	8,037	+9,7011	+8,5043	,9051	,9619	235	+,016	− ,09
1434	4	+ 7 59 55,34	8,072	+9,7458	+8,7486	,9070	,9616	241	+,009	− ,09
1435	3	−11 34 44,47	8,141	+9,2838	−8,9109	,9107	,9608	245		− ,03
1436	3	+18 0 16,91	8,110	+9,8426	+9,0974	+0,9090	+9,9612	246	+,017	− ,05
1437	2	+17 35 10,47	8,126	+9,8395	+9,0884	,9099	,9610	247	+,004	− ,05
1438	2	+ 7 12 3,26	8,190	+9,7372	+8,7103	,9133	,9603	248	+,007	− ,03
1439	3	+11 59 14,10	8,200	+9,7882	+8,9297	,9138	,9602	250	+,004	+ ,06
1440	3	+ 8 20 20,71	8,227	+9,7490	+8,7753	,9152	,9599	252	+,019	− ,10

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan 1, 1836.	Annual Preces-sion.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	*s*				
1441	Aquilæ	7	2	19 36 54,91	+2,842	+8,4451	—8,7911	+0,4536	+7,7071
1442	16 *c* Cygni *seq.*	7	2	37 29,96	1,610	,6333	,9766	,2068	+8,5185
1443	———	7	3	37 58,97	2,121	,5450	,8859	,3265	+8,3337
1444	Aquilæ	7.8	3	38 46,42	2,852	,4524	,7889	,4551	+7,6948
1445	Sagittæ	9	2	38 47,59	2,682	,4662	,8030	,4285	+7,9477
1446	Sagittarii	7.8	3	39 18,66	4,169	+8,5786	—8,9122	+0,6200	—8,4062
1447	Cygni *seq.*	7.8	3	39 39,68	2,198	,5392	8,8718	,3402	+8,3052
1448	Aquilæ	7	3	39 41,25	2,953	,4512	8,7852	,4703	+7,4235
1449	Sagittæ	7.8	2	39 43,70	2,654	,4731	8,8071	,4239	+7,9809
1450	Cygni	7.8	2	40 18,48	1,229	,7110	9,0407	,0895	+8,6329
1451	Sagittæ	7.8	2	41 22,54	2,633	+8,4825	—8,8063	+0,4204	+8,0128
1452	Antinoi	7.8	3	41 28,57	3,014	,4570	8,7801	,4791	+7,1053
1453	Cygni	7.8	3	41 25,05	1,313	,7023	9,0264	,1183	+8,6181
1454	Sagittarii	7.8	2	42 2,82	3,498	,4849	8,8051	,5438	—8,0109
1455	Cygni	7.8	3	43 25,96	2,291	,5398	8,8538	,3600	+8,2745
1456	Vulpeculæ	7	2	43 39,45	2,639	+8,4910	—8,8038	+0,4214	+8,0173
1457	Aquilæ	8	3	44 26,58	2,858	,4749	,7838	,4561	+7,7124
1458	Sagittæ	8	2	44 37,15	2,692	,4893	,7972	,4301	+7,9658
1459	———	7.8	2	45 20,55	2,671	,4943	,7988	,4267	+7,9920
1460	———	7.8	5	45 35,04	2,693	,4928	,7963	,4302	+7,9685
1461	57 Aquilæ *seq.*	7	3	45 45,23	3,250	+8,4784	—8,7808	+0,5119	—7,6556
1462	———	8	1	45 57,43	2,831	,4823	,7839	,4519	+7,7706
1463	Vulpeculæ *seq.*	7	2	46 11,21	2,635	,5017	,8021	,4208	+8,0340
1464	Aquilæ	7.8	3	47 27,94	2,825	,4884	,7830	,4510	+7,7901
1465	Vulpeculæ	7	2	47 33,58	2,540	,5189	,8130	,4048	+8,1265
1466	Sagittæ	8.9	3	48 39,80	2,694	+8,5044	—8,7935	+0,4304	+7,9818
1467	———	8	3	50 5,39	2,652	,5146	,7969	,4236	+8,0352
1468	Aquilæ	8	2	50 10,02	2,838	,4978	,7795	,4530	+7,7777
1469	———	8.9	4	50 10,56	2,834	,4981	,7797	,4524	+7,7851
1470	Sagittæ	8	3	50 18,74	2,713	,5090	,7901	,4334	+7,9678
1471	Aquilæ	7.8	3	50 34,69	2,913	+8,4949	—8,7748	+0,4643	+7,6097
1472	Sagittarii	9	3	50 45,09	3,529	,5226	,8015	,5476	—8,0825
1473	Aquilæ	8	3	50 51,55	2,940	,4947	,7733	,4683	+7,5258
1474	Sagittarii	8	3	51 3,61	3,571	,5293	,8067	,5528	—8,1224
1475	Aquilæ	9	3	51 5,91	2,835	,5014	,7793	,4525	+7,7871
1476	Aquilæ	8	2	52 13,29	2,926	+8,5000	—8,7725	+0,4663	+7,5766
1477	———	8	3	52 52,88	2,912	,5031	,7725	,4642	+7,6216
1478	———	8.9	3	52 55,74	2,924	,5027	,7719	,4660	+7,5866
1479	Sagittarii	7.8	3	53 8,40	3,997	,6057	,8737	,6017	—8,3980
1480	Vulpeculæ	8	1	53 14,95	2,593	,5333	,8012	,4138	+8,1069
1481	Sagittarii	8	3	53 45,74	3,465	+8,5261	—8,7913	+0,5397	—8,0317
1482	Antinoi	8	3	55 2,28	3,075	,5067	,7666	,4878	—6,3129
1483	Capricorni	8	3	56 1,71	3,421	,5296	,7844	,5341	—7,9910
1484	———	8	3	56 26,54	3,400	,5286	,7819	,5315	—7,9654
1485	Sagittæ	6.7	3	56 32,78	2,718	,5307	,7836	,4342	+7,9887

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a′	Logarithms of b′	Logarithms of c′	Logarithms of d′	Piazzi No.	Annual P. M. A. R.	Annual P. M. Decn.
		° ′ ″	″						s.	″
1441	3	+10 31 22,87	+ 8,237	+9,7738	+8,8758	+0,9158	+9,9598	253	—,005	+ ,13
1442		+50 8	8,280	+9,9899	+9,5013	,9180	,9594	262	+,003	
1443	4	+37 55 57,69	8,317	+9,9547	+9,4067	,9200	,9590	263	+,005	— ,04
1444	3	+10 3 49,03	8,386	+9,7671	+8,8641	,9236	,9582	268	+,004	— ,22
1445	2	+17 37 48,45	8,386	+9,8376	+9,1029	,9236	,9582	270	+,017	— ,08
1446	3	—42 15 44,75	8,434	—9,4609	—9,4517	+0,9260	+9,9577	266	—,003	+ ,01
1447	2	+35 41 33,04	8,449	+9,9455	+9,3909	,9268	,9575	277	+,008	— ,13
1448	3	+ 5 22 55,40	8,460	+9,7143	+8,5977	,9274	,9594	272	,000	— ,14
1449	3	+18 47 0,37	8,460	+9,8482	+9,1332	,9274	,9594	274	+,039	— ,04
1450	3	+56 38 55,38	8,497	+9,9978	+9,5492	,9293	,9570	284	+,024	— ,03
1451	3	+19 48 36,97	8,592	+9,8537	+9,1623	+0,9341	+9,9559	287	+,023	— ,17
1452	3	+ 2 32 53,05	8,602	+9,6758	+8,2809	,9346	,9558	285	+,007	,00
1453	2	+55 26 56,96	8,587	+9,9956	+9,5477	,9338	,9560	292	+,025	— ,15
1454	4	—19 37 21,44	8,650	+9,0253	—9,1610	,9370	,9552	288	+,006	— ,13
1455	2	+32 52 1,52	8,750	+9,9304	+9,3748	,9420	,9541	300	+,036	— ,16
1456	3	+19 37 34,43	8,771	+9,8519	+9,1674	+0,9430	+9,9538	301	+,020	— ,11
1457	4	+ 9 56 5,37	8,839	+9,7649	+8,8819	,9464	,9530	307	—,004	— ,19
1458	1	+17 25 32,54	8,850	+9,8344	+9,1215	,9469	,9529	308	+,018	— ,10
1459	3	+18 19 23,30	8,907	+9,8414	+9,1454	,9497	,9522	312	+,015	+ ,02
1460	7	+17 23 50,95	8,922	+9,8338	+9,1242	,9505	,9520	315	+,019	+ ,02
1461	2	— 8 39 25,63	8,943	+9,4683	—8,8268	+0,9515	+ 9,9520	314	—,013	— ,04
1462	3	+11 11 19,15	8,954	+9,7781	+8,9384	,9520	,9517	317	+,017	— ,03
1463	2	+19 54 16,05	8,975	+9,8531	+9,1833	,9530	,9514	321	—,001	— ,17
1464	4	+11 31 58,47	9,073	+9,7810	+8,9573	,9578	,9502	326	+,005	— ,10
1465	4	+23 53 40,00	9,082	+9,8797	+9,2637	,9580	,9501	327	+,012	— ,03
1466	4	+17 27 26,66	9,162	+9,8331	+9,1373	+0,9620	+9,9491	335	+,015	— ,06
1467	3	+19 21 47,35	9,276	+9,8470	+9,1860	,9673	,9477	338	+,004	— ,08
1468	4	+10 58 45,28	9,286	+9,7745	+8,9458	,9678	,9475	336	+,002	+ ,02
1469	5	+11 9 22,42	9,286	+9,7767	+8,9529	,9678	,9475	337	+,005	+ ,13
1470	3	+16 42 40,76	9,296	+9,8267	+9,1252	,9693	,9474	341	+,010	— ,04
1471	3	+ 7 28 56,96	9,317	+9,7364	+8,7820	+0,9693	+9,9471	345	+,012	+ ,01
1472	3	—21 17 50,78	9,333	+8,9191	—9,2279	,9700	,9469	339	+,006	+ ,04
1473	3	+ 6 9 10,88	9,338	+9,7210	+8,6994	,9702	,9469	348	+,006	— ,05
1474	3	—23 4 41,18	9,358	+8,7243	—9,2623	,9712	,9466	346	+,006	— ,03
1475	2	+11 7 34,62	9,358	+9,7760	+8,9550	,9712	,9471	350	+,005	+ ,07
1476	3	+ 6 50 41,90	9,441	+9,7292	+8,7496	+0,9750	+9,9455	357	+,010	+ ,01
1477	4	+ 7 32 9,75	9,492	+9,7372	+8,7940	,9774	,9448	363	+,005	— ,04
1478	3	+ 6 57 58,95	9,497	+9,7308	+8,7594	,9776	,9448	364	+,011	+ ,02
1479	2	—38 18 36,97	9,518	—9,3096	—9,4688	,9785	,9445	359	—,009	— ,38
1480	4	+21 59 44,22	9,518	+9,8645	+9,2501	,9785	,9445	368	+,002	+ ,07
1481	4	—18 41 33,91	9,564	+9,1139	—9,1843	+0,9806	+9,9439	367	+,005	+ ,07
1482	4	— 0 21 51,99	9,656	+9,6314	—7,4890	,9848	,9427	376	+,018	— ,13
1483	4	—16 49 53,26	9,743	+9,2095	—9,1481	,9887	,9415	381	+,010	— ,07
1484	5	—15 53 0,90	9,768	+9,2504	—9,1246	,9898	,9411	387	+,006	— ,04
1485	2	+16 39 48,37	9,773	+9,8241	+9,1461	,9900	,9410	392	+,011	— ,20

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	*s.*				
1486	Antinoi	9	2	19 56 33,87	+3,212	+8,5153	—8,7682	+0,5068	—7,6032
1487	Sagittarii	7.8	3	56 42,11	3,491	,5393	,7916	,5429	—8,0719
1488	Sagittæ	7	2	56 50,03	2,705	,5329	,7847	,4322	+8,0058
1489	Sagittarii	8	3	56 55,35	3,542	,5463	,7978	,5492	—8,1221
1490	Capricorni	8	2	57 37,78	3,345	,5278	,7757	,5244	—7,8922
1491	Capricorni	7.8	2	57 44,10	3,334	+8,5271	—8,7748	+0,5230	—7,8759
1492	Antinoi	8	2	58 1,66	3,260	,5230	,7691	,5132	—7,7345
1493	Vulpeculæ	7.8	1	58 6,43	2,570	,5538	,7999	,4099	+8,1492
1494	Antinoi	8	2	58 40,46	3,095	,5193	,7628	,4907	—6,8860
1495	Sagittæ	7.8	2	59 22,42	2,727	,5394	,7800	,4357	+7,9906
1496	Antinoi	8	3	59 27,08	3,028	+8,5218	—8,7621	+0,4812	+7,0573
1497	Vulpeculæ	8	2	20 0 1,52	2,633	,5523	,7900	,4204	+8,0993
1498	Sagittæ	8	3	0 1,77	2,724	,5417	,7797	,4352	+7,9963
1499	———	7.8	3	1 4,91	2,654	,5533	,7864	,4239	+8,0821
1500	Vulpeculæ	8.9	3	1 28,43	2,622	,5584	,7900	,4186	+8,1157
1501	Aquilæ	7	2	1 39,96	2,728	+8,5468	—8,7776	+0,4358	+7,9985
1502	Antinoi	8.9	3	1 45,32	3,202	,5321	,7622	,5054	—7,5947
1503	Vulpeculæ	7	2	1 50,65	2,611	,5750	,8049	,3998	+8,2140
1504	Antinoi	7	2	2 16,26	3,256	,5366	,7645	,5127	—7,7451
1505	———	7	2	3 21,54	3,200	,5341	,7614	,5051	—7,5913
1506	Sagittæ	7		2	2,638	+8,5607	—8,7868	+0,4213	+8,1057
1507	Antinoi	8	3	2 51,22	3,201	,5357	8,7609	0,5053	—7,5972
1508	——— *seq.*	7	2	2 53,68	3,079	,5328	8,7580	0,4884	—6,5406
1509	Aquilæ	7.8	2	3 5,79	2,950	,5357	8,7601	0,4698	+7,5465
1510	Draconis	7.8		3	0,794	,8803	9,1041	9,8998	+8,8311
1511	Aquilæ	8	3	3 22,14	2,957	+8,5363	—8,7596	+0,4708	+7,5257
1512	Antinoi	8	3	3 25,17	3,074	,5345	,7574	,4877	—6,2287
1513	Aquilæ	7	2	3 39,99	2,746	,5516	,7737	,4387	+7,9835
1514	Capricorni	7.8	3	3 44,69	3,297	,5440	,7655	,5181	—7,8362
1515	Vulpeculæ	8	2	4 5,30	2,631	,5659	,7863	,4201	+8,1179
1516	Aquilæ	8	3	4 47,67	2,746	+8,5553	—8,7725	+0,4387	+7,9885
1517	Vulpeculæ	7.8		5	2,505	,5868	,8029	,3988	+8,2328
1518	Aquilæ	8	2	5 15,47	2,971	,5417	,7569	,4729	+7,4673
1519	———	8	2	5 20,03	2,749	,5567	,7717	,4392	+7,9867
1520	Capricorni	7.8	2	5 48,65	3,313	,5518	,7645	,5202	—7,8738
1521	Antinoi	8	3	5 55,64	3,075	+8,5424	—8,7545	+0,4878	—6,3072
1522	Aquilæ *pr.*	7.8	2	6 7,26	2,946	,5455	,7568	,4692	+7,5719
1523	——— *seq.*	7.8	2	6 7,91	2,946	,5455	,7568	,4692	+7,5731
1524	———	7	3	6 39,53	3,010	,5452	,7542	,4786	+7,2518
1525	Capricorni	7	1	6 44,12	3,411	,5638	,7725	,5329	—8,0243
1526	Antinoi	8.9	2	7 10,23	3,128	+8,5467	—8,7537	+0,4953	—7,2727
1527	Aquilæ	7.8	2	7 16,69	3,022	,5469	,7533	,4803	+7,1597
1528	Cygni	8	2	7 56,36	2,241	,6408	,8450	,3504	+8,4112
1529	———	7	3	8 29,28	1,887	,7100	,9117	,2758	+8,5686
1530	———	7.8	1	8 31,77	2,239	,6436	,8450	,3500	+8,4154

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″.	″						s.	″
1486	3	− 7 2 40,21	+9,773	+9,5105	−8,7760	+0,9900	+9,9410	389	+,019	− ,07
1487	4	−19 57 8,28	9,783	+9,0414	−9,2212	,9905	,9409	388	+,001	− ,15
1488	3	+17 16 38,05	9,793	+9,8280	+9,1619	,9909	,9408	394	+,012	− ,01
1489	3	−22 8 6,82	9,799	+8,8692	−9,2650	,9912	,9407	390	+,001	− ,17
1490	3	−13 23 24,84	9,860	+9,3424	−9,0564	,9939	,9398	396	+,007	− ,08
1491	3	−12 54 11,62	9,865	+9,3598	−9,0409	+0,9941	+9,9398	398	+,011	+ ,03
1492	3	− 9 22 44,50	9,890	+9,4579	−8,9048	,9952	,9394	399	+,017	− ,06
1493	3	+23 12 19,64	9,890	+9,8704	+9,2887	,9952	,9394	401	+,005	+ ,04
1494	3	− 1 20 14,72	9,936	+9,6170	−8,0620	,9972	,9388	403	+,031	− ,15
1495	4	+16 24 9,01	9,986	+9,8202	+9,1486	,9994	,9380	409	+,019	− ,06
1496	3	+ 1 58 29,30	9,991	+9,6665	+8,2332	+0,9996	+9,9380	407	+,018	+ 05
1497	1	+20 38 4,46	10,037	+9,8519	+9,2466	1,0016	,9373	415	+,013	− ,06
1498	3	+16 33 8,61	10,032	+9,8214	+9,1540	1,0014	,9374	413	+,009	+ ,05
1499	3	+19 44 46,00	10,117	+9,8451	+9,2319	1,0051	,9361	422	+,011	− ,17
1500	2	+21 8 55,77	10,142	+9,8555	+9,2615	1,0061	,9358	424	+,018	+ ,07
1501	3	+16 26 6,73	10,158	+9,8195	+9,1564	+1,0068	+9,9355	2	−,005	− ,03
1502	4	− 6 38 25,26	10,167	+9,5211	−8,7679	,0072	,9354	423	+,017	− ,05
1503	2	+25 48 2,91	10,172	+9,8842	+9,3444	,0074	,9353	5	+,007	+ ,01
1504	3	− 9 19 19,19	10,208	+9,4609	−8,9154	,0089	,9348	4	+,009	− ,08
1505	2	− 6 34 2,75	10,218	+9,5224	−8,7646	,0094	,9346	6	+,006	− ,10
1506	2	+20 31 28,55	10,238	+9,8500	+9,2533	+1,0102	+9,9343	15		− ,09
1507	1	− 6 37 49,28	10,253	+9,5211	−8,7704	,0108	,9341	8	+,017	− ,03
1508	2	− 0 36 25,61	10,253	+9,6284	−7,7167	,0108	,9341	12	+,017	− ,19
1509	3	+ 5 52 3,10	10,268	+9,7160	+8,7203	,0115	,9339	17	+,016	− ,03
1510		+63 13	10,278	+9,9827	+9,6607	,0119	,9337	30		
1511	2	+ 5 35 26,16	10,288	+9,7126	+8,6997	+1,0123	+9,9336	19	+,014	− ,15
1512	3	− 0 18 14,75	10,293	+9,6335	−7,4047	,0125	,9335	18	+,016	− ,14
1513	1	+15 41 16,21	10,308	+9,8129	+9,1437	,0132	,9333	23	+,016	+ ,16
1514	2	−11 19 28,90	10,318	+9,4116	−9,0038	,0136	,9331	20	+,011	− ,08
1515	1	+20 52 10,14	10,338	+9,8513	+9,2645	,0144	,9328	27	+,015	+ ,01
1516	3	+15 43 54,14	10,393	+9,8129	+9,1480	+1,0167	+9,9320	32	+,020	− ,04
1517	2	+26 15 33,25	10,413	+9,8848	+9,3616	,0176	,9317	36		+ ,03
1518	3	+ 4 49 13,70	10,428	+9,7024	+8,6418	,0182	,9315	35	+,015	− ,18
1519		+15 36	10,434	+9,8116	+9,1465	,0184	,9314	38	+,022	
1520	3	−12 7 41,41	10,472	+9,3892	−9,0401	,0200	,9308	39	+,014	− ,12
1521	3	− 0 20 52,45	10,482	+9,6325	−7,4832	+1,0205	+9,9306	41	+,017	− ,10
1522	2	+ 6 5 21,58	10,498	+9,7177	+8,7455	,0211	,9304	43	−,010	− ,03
1523	3	+ 6 6 3,66	10,498	+9,7177	+8,7467	,0211	,9304	44	−,013	− ,08
1524	3	+ 2 54 46,56	10,537	+9,6776	+8,4273	,0227	,9297	46	+,005	− ,12
1525	2	−16 47 18,82	10,543	+9,2279	−9,1815	,0229	,9297	45	+,016	− ,12
1526	3	− 3 3 33,77	10,572	+9,5888	−8,4481	+1,0241	+9,9292	50	−,006	+ ,03
1527	3	+ 2 21 6,39	10,682	+9,6712	+8,3354	,0246	,9290	51	+,012	,00
1528	1	+36 6 40,82	10,621	+9,9299	+9,4946	,0262	,9284	55	+,016	− ,02
1529	4	+46 13 4,67	10,666	+9,9595	+9,5846	,0280	,9277	63	+,014	,00
1530	4	+36 15 24,12	10,671	+9,9299	+9,4980	,0282	,9276	61	+,005	+ ,06

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces- sion.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	s.				
1531	Aquilæ	7.8	3	20 9 37,15	+2,758	+8,5694	−8,7660	+0,4406	+7,9931
1532	Capricorni	7.8	3	9 51,11	3,365	,5689	8,7645	,5270	−7,9758
1533	Vulpeculæ	7.8	3	9 56,45	2,634	,5846	8,7799	,4206	+8,1406
1534	Draconis	6.7	2	10 26,47	1,107	,8587	9,0523	,0441	+8,7969
1535	Capricorni	8.9	3	10 41,70	3,364	,5715	8,7634	,5269	−7,9778
1536	Capricorni	8	2	11 36,27	3,450	+8,5835	−8,7715	+0,5378	−8,0921
1537	Vulpeculæ	7.8	2	11 40,34	2,605	,5939	,7819	,4158	+8,1758
1538	Antinoi	7.8	4	11 41,96	3,203	,5629	,7507	,5056	−7,6395
1539	Vulpeculæ	7.8	2	12 19,85	2,605	,5963	,7811	,4158	+8,1792
1540	Antinoi	7.8	3	12 23,88	3,202	,5649	,7499	,5054	−7,6414
1541	Capricorni	7.8	3	12 28,83	3,530	+8,5962	−8,7809	+0,5478	−8,1781
1542	———	8	2	13 5,80	3,395	,5818	8,7637	,5308	−8,0308
1543	Antinoi	8.9	2	13 8,59	3,206	,5672	8,7492	,5060	−7,6572
1544	Cephei	8	2	13 14,18	1,387	,8208	9,0031	,1421	+8,7415
1545	Capricorni	8	3	13 31,50	3,323	,5761	8,7564	,5215	−7,9249
1546	Capricorni	8	2	13 42,14	3,251	+8,5712	−8,7510	+0,5120	−7,7812
1547	———	8	2	13 43,51	3,448	,5895	,7690	,5376	−8,0989
1548	Vulpeculæ	8	2	13 47,89	2,640	,5955	,7750	,4216	+8,1502
1549	Capricorni	8	1	13 56,27	3,393	,5840	,7626	,5306	−8,0317
1550	Antinoi	9	4	14 16,94	3,188	,5696	,7469	,5035	−7,6007
1551	Vulpeculæ	9	2	14 36,55	2,644	+8,5974	−8,7736	+9,4223	+8,1498
1552	Capricorni	8	1	14 36,94	3,562	,6073	,7832	0,5517	−8,2163
1553	Delphini	8	2	15 34,57	2,876	,5772	,7493	0,4588	+7,8103
1554	Vulpeculæ	8	3	15 36,21	2,585	,6085	,7806	0,4125	+8,2104
1555	———	7.8	2	16 7,12	2,586	,6099	,7798	9,4126	+8,2112
1556	Antinoi	8	3	16 12,01	3,108	+8,5727	−8,7423	+0,4925	−7,1262
1557	———	7	3	16 16,04	3,057	,5726	,7420	,4853	+6,5548
1558	Vulpeculæ	7	2	16 18,82	2,595	,6092	,7783	,4141	+8,2038
1559	Antinoi	7.8	2	16 21,21	3,052	,5730	,7418	,4846	+6,7443
1560	Delphini	9	1	16 23,93	2,859	,5808	,7493	,4562	+7,8502
1561	Antinoi	9	1	16 35,61	3,144	+8,5747	−8,7425	+0,4975	−7,4110
1562	Capricorni	7.8	1	16 55,11	3,463	,6007	,7671	,5394	−8,1278
1563	———	7.8	1	17 7,98	3,351	,5890	,7546	,5251	−7,9837
1564	Vulpeculæ	7.8	3	17 21,68	2,582	,6140	,7791	,4120	+8,2194
1565	Antinoi	7.8	3	17 25,08	3,152	,5772	,7417	,4986	−7,4605
1566	Antinoi	8.9	4	17 27,00	3,144	+8,5771	−8,7414	+0,4972	−7,4153
1567	Capricorni	7.8	1	17 34,91	3,470	,6037	,7674	,5403	−8,1391
1568	Antinoi	7	1	17 59,46	3,022	,5780	,7400	,4803	+7,2059
1569	Vulpeculæ	8	2	18 7,37	2,603	,6135	,7753	,4155	+8,2042
1570	Antinoi	7	2	18 21,97	3,041	,5788	,7392	,4830	+6,9668
1571	Draconis	7	1	18 51,55	1,921	+8,9213	−9,0804	+0,2835	+8,8709
1572	Vulpeculæ	8	1	18 51,68	2,600	,6160	8,7748	,4150	+8,2094
1573	Antinoi	8	2	18 54,99	3,143	,5812	8,7394	,4973	−7,4156
1574	———	8	2	18 56,28	3,119	,5806	8,7389	,4940	−7,2428
1575	———	7.8	3	18 57,95	3,118	,5808	8,7388	,4939	−7,2403

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A.R.	Decn.
		° ′ ″	″							
1531	3	+15 22 14,68	+10,754	+9,8075	+9,1533	+1,0316	+9,9263	68	+,004	— ,12
1532	3	—14 47 51,73	10,774	+9,3117	—9,1372	,0324	,9259	66	+,011	— ,14
1533	3	+21 3 55,83	10,779	+9,8500	+9,2866	,0326	,9259	72	+,013	+ ,07
1534	3	+60 8 22,08	10,808	+9,9759	+9,6700	,0338	,9254	82	+,030	— ,11
1535	3	—14 47 0,13	10,838	+9,3139	—9,1393	,0349	,9249	73	+,002	— ,13
1536	2	—18 50 3,30	10,907	+9,1461	—9,2443	+1,0377	+9,9237	80	+,011	— ,04
1537	2	+22 25 56,79	10,907	+9,8579	+9,3176	,0377	,9237	86	—,007	+ ,06
1538	3	— 6 52 5,93	10,912	+9,5198	—8,8124	,0379	,9237	84	+,003	— ,15
1539	3	+22 29 14,82	10,965	+9,8579	+9,3209	,0400	,9228	91	+,007	+ ,04
1540	3	— 6 51 51,27	10,960	+9,5198	—8,8144	,0398	,9228	90	+,010	— ,14
1541	3	—22 28 15,35	10,965	+8,9085	—9,3200	+1,0400	+9,9228	88	+,020	— ,05
1542	2	—16 20 36,61	11,014	+9,2577	—9,1890	,0419	,9219	94	+,013	+ ,23
1543	2	— 7 4 52,56	11,014	+9,5159	—8,8300	,0419	,9219	95	+,003	— ,06
1544	3	+56 23 58,48	11,013	+9,9713	+9,6605	,0417	,9220	104	+,010	— ,32
1545	3	—12 53 54,47	11,043	+9,3747	—9,0899	,0431	,9214	96	,000	+ ,07
1546	1	— 9 20 33,83	11,052	+9,4669	—8,9515	+1,0435	+9,9213	98	+,021	— ,04
1547	3	—18 51 31,47	11,058	+9,1523	—9,2510	,0437	,9212	97	+,017	,00
1548	2	+21 0 14,47	11,058	+9,8476	+9,2964	,0437	,9212	101	+,018	+ ,02
1549	2	—16 18 30,26	11,073	+9,2601	—9,1900	,0442	,9209	100	+,010	— ,09
1550	1	— 6 11 41,60	11,098	+9,5327	—8,7743	,0452	,9205	103	+,015	— ,02
1551	2	+20 53 4,46	11,116	+9,8463	+9,2963	+1,0459	+9,9202	106	+,012	— ,07
1552	2	—23 59 48,90	11,121	+8,7634	—9,3532	,0461	,9201	105	+,027	— ,04
1553	3	+ 9 50 21,98	11,189	+9,7559	+8,9800	,0488	,9189	110	+,007	— ,16
1554	2	+23 33 28,95	11,189	+9,8633	+9,3487	,0488	,9189	113	+,002	— ,04
1555	2	+23 30 54,03	11,227	+9,8627	+9,3496	,0503	,9182	118	+,001	— ,04
1556	2	— 2 4 1,57	11,233	+9,6064	—8,3020	+1,0505	+9,9181	115	+,015	— ,08
1557	2	+ 0 32 32,57	11,237	+9,6454	+7,7309	,0506	,9181	116	+,014	— ,16
1558	1	+23 8 48,33	11,242	+9,8597	+9,3434	,0508	,9180	122	+,010	— ,08
1559	2	+ 0 50 38,75	11,247	+9,6493	+7,9203	,0510	,9179	117	+,005	— ,06
1560	2	+10 41 54,31	11,252	+9,7634	+9,0186	,0512	,9178	120	+,013	— ,23
1561	2	— 3 56 57,96	11,266	+9,5752	—8,5861	+1,0518	+9,9175	121	+,005	— ,14
1562	2	—19 40 54,15	11,291	+9,1173	—9,2778	,0527	,9171	123	—,001	— ,07
1563	1	—14 23 33,61	11,304	+9,3324	—9,1459	,0532	,9169	125	+,008	— ,09
1564	2	+23 45 3,22	11,314	+9,8633	+9,3570	,0536	,9167	130	+,014	+ ,01
1565	1	— 4 23 39,02	11,323	+9,5682	—8,6353	,0540	,9165	128	—,022	— ,06
1566	2	— 3 58 24,96	11,328	+9,5752	—8,5903	+1,0542	+9,9164	129	+,015	— ,11
1567	2	—20 4 41,66	11,338	+9,0969	—9,2880	,0545	,9162	127	+,012	— ,17
1568	2	+ 2 25 37,32	11,368	+9,6702	+8,3816	,0556	,9157	134	+,006	— ,03
1569	2	+22 54 56,65	11,372	+9,8579	+9,3445	,0558	,9156	137	+,011	— ,07
1570	3	+ 1 23 7,57	11,397	+9,6571	+8,1427	,0567	,9152	136	+,011	— ,01
1571		+62 54	11,420	+9,9685	+9,7052	+1,0577	+9,9148	150	,000	
1572	2	+23 4 13,79	11,424	+9,8579	+9,3492	,0578	,9147	141	+,004	— ,05
1573	3	— 3 55 44,97	11,434	+9,5753	—8,5907	,0582	,9145	138	+,019	— ,06
1574	2	— 2 39 0,84	11,434	+9,5966	—8,4185	,0582	,9145	139	—,010	— ,16
1575	3	— 2 38 0,18	11,438	+9,5977	—8,4159	,0584	,9144	140	+,012	— ,06

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Precession.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	*s.*				
1576	Delphini	8.9	1	20 19 16,06	+2,858	+8,5889	—8,7458	+0,4561	+7,8629
1577	Antinoi	8	3	19 58,88	3,163	,5847	,7386	,5001	—7,5221
1578	———	7.8	2	20 0,71	3,022	,5834	,7374	,4803	+7,2054
1579	Aquilæ	7.8	2	20 8,79	2,916	,5875	,7410	,4648	+7,7257
1580	Antinoi	7.8	2	20 14,16	3,063	,5838	,7367	,4861	+6,3697
1581	Vulpeculæ	7.8	1	20 14,52	2,598	+8,6204	—8,7736	+0,4146	+8,2170
1582	Delphini	7.8	2	20 35,65	2,920	,5884	,7403	,4654	+7,7174
1583	Antinoi	8	2	21 22,86	3,163	,5884	,7368	,5001	—7,5258
1584	———	8.9	2	21 53,02	3,181	,5905	,7367	,5026	—7,6049
1585	———	8.9	2	21 56,38	3,189	,5909	,7371	,5036	—7,6346
1586	Capricorni	7.8	3	21 59,63	3,271	+8,5958	—8,7417	+ 0,5147	—7,8592
1587	——— *pre.*	8	4	22 37,00	3,522	,6249	,7685	,5468	—8,2111
1588	——— *seq*	8	3	22 39,26	3,522	,6252	,7684	,5468	—8,2117
1589	Delphini	8	2	22 42,74	2,692	,6148	,7581	,4301	+8,1304
1590	Antinoi	8	2	23 20,24	3,143	,5929	,7335	,4973	—7,4329
1591	Delphini *seq.*	7.8	3	23 23,30	2,863	+8,5995	—8,7401	+0,4568	+7,8689
1592	Cygni	7	2	23 26,95	1,849	,7696	,9102	,2669	+8,6433
1593	———	8	1	23 45,67	1,853	,7701	,9094	,2679	+8,6434
1594	———	7	1	24 58,71	2,381	,6703	,8044	,3768	+8,4011
1595	———	7	1	25 49,45	1,845	,7784	,9095	,2660	+8,6541
1596	Aquarii	8	1	25 55,05	3,250	+8,6048	—8,7350	+0,5119	—7,8276
1597	Delphini	7.8	2	26 19,26	2,797	8,6131	8,7417	0,4467	+8,0018
1598	Aquarii	8	2	26 21,34	3,248	8,6059	8,7343	0,5116	—7,8258
1599	Draconis	7	2	26 21,57	0,381	9,0301	9,1594	9,5809	+8,9980
1600	Aquilæ	8.9	2	26 26,70	3,031	8,6003	8,7284	0,4816	+7,1358
1601	Delphini	8	1	26 36,17	2,864	+8,6080	—8,7357	+0,4570	+7,8794
1602	Cygni	8.9	2	26 46,99	2,360	,6795	,8066	,3729	+8,4212
1603	Aquilæ	8	2	26 55,81	3,116	,6016	,7279	,4936	—7,2583
1604	———	8	3	27 29,46	3,016	,6030	,7272	,4794	+7,2867
1605	Delphini	8.9	3	27 35,59	2,865	,6106	,7343	,4571	+7,8827
1606	Cephei	6.7	2	27 45,93	1,471	+8,8581	—8,9815	+0,1676	+8,7779
1607	Aquilæ	7.8	2	28 25,35	3,032	,6051	8,7256	,4817	+7,1370
1608	———	8	3	28 42,28	3,103	,6059	8,7252	,4918	—7,1188
1609	Cephei	7	1	28 43,05	1,233	,9049	9,0246	,0910	+8,8419
1610	Cygni	7	2	29 14,68	1,836	,7917	8,9093	,2639	+8,6709
1611	Capricorni	7.8	2	29 25,21	3,405	+8,6282	—8,7448	+0,5321	—8,1092
1612	Aquarii	7.8	1	29 30,61	3,160	,6091	,7255	,4997	—7,5436
1613	Cygni	7.8	2	29 35,21	1,863	,7874	,9037	,2702	+8,6628
1614	———	7.8	2	30 3,80	1,746	,8126	,9271	,2420	+8,7050
1615	Delphini	8	1	30 13,21	2,833	,6198	,7333	,4522	+7,9563
1616	Capricorni	8.9	3	30 22,40	3,362	+8,6257	—8,7388	+0,5266	—8,0535
1617	Delphini	7.8	2	30 35,49	2,833	,6210	8,7332	,4522	+7,9654
1618	Cephei	7.8	2	30 49,29	1,147	,9274	9,0391	,0596	+8,8700
1619	Delphini	7.8	2	30 57,24	2,920	,6152	8,7260	,4654	+7,7569
1620	Cygni	8	1	31 24,21	2,459	,6748	8,7836	,3908	+8,3740

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of				Piazzi No.	Annual P. M.	
				a′	b′	c′	d′		A. R.	Decn.
		° ′ ″	″						s	″
1576	3	+10 49 14,66	+11,458	+9,7634	+9,0312	+1,0591	+9,9141	143	+,020	— ,04
1577	4	— 4 58 5,16	11,511	+9,5575	—8,6965	,0611	,9131	148	+,005	— ,21
1578	2	+ 2 24 1,18	11,511	+9,6702	+8,3811	,0611	,9131	149	+,011	+ ,02
1579	3	+ 7 53 55,70	11,520	+9,7340	+8,8976	,0615	,9129	151	+,007	— ,13
1580	3	+ 0 20 42,57	11,530	+9,6425	+7,5458	,0618	,9127	152	+,001	— ,45
1581		+23 15	11,525	+9,8585	+9,3563	+1,0616	+9,9128	155	+,019	
1582	2	+ 7 43 12,94	11,549	+9,7324	+8,8895	,0625	,9124	156	+,010	— ,16
1583		— 4 58	11,611	+9,5587	—8,7003	,0649	,9112	158	+,001	
1584	3	— 5 55 59,39	11,649	+9,5416	—8,7787	,0663	,9105	159	+,012	— ,10
1585	2	— 6 22 9,41	11,649	+9,5327	—8,8081	,0663	,9105	160	+,005	— ,02
1586	2	—10 34 42,07	11,653	+9,4425	—9,0278	+1,0664	+9,9104	161	+,010	— ,14
1587	2	—22 42 9,05	11,696	+8,9395	—9,3522	,0680	,9096	166	+,011	,00
1588	3	—22 42 34,59	11,701	+8,9395	—9,3527	,0682	,9095	167	+,021	— ,04
1589	3	+19 7 24,38	11,701	+9,8299	+9,2818	,0682	,9095	171	+,005	— ,11
1590	4	— 3 59 20,19	11,748	+9,5763	—8,6077	,0700	,9086	175	+,012	— ,05
1591	3	+10 42 48,81	11,748	+9,7612	+9,0374	+1,0700	+9,9086	178	+,005	— ,18
1592	1	+48 22 34,24	11,748	+9,9513	+9,6417	,0700	,9086	183	+,008	— ,07
1593	3	+48 19 23,05	11,772	+9,9508	+9,6422	,0708	,9081	184	—,018	— ,23
1594	3	+32 32 57,57	11,862	+9,9031	+9,5030	,0741	,9063	190	—,003	— ,07
1595	1	+48 39 48,38	11,917	+9,9494	+9,6499	,0762	,9053	199	+,005	+ ,03
1596	3	— 9 38 2,54	11,932	+9,4683	—8,9976	+1,0767	+9,9050	193	+,013	— ,20
1597	2	+14 9 26,99	11,960	+9,7903	+9,1645	,0777	,9044	198	+,009	— ,09
1598	1	— 9 33 43,82	11,964	+9,4698	—8,9958	,0779	,9043	195	—,006	— ,20
1599	2	+68 13 21,28	11,950	+9,8621	+9,7433	,0774	,9046	208	+,022	+ ,13
1600	2	+ 1 57 3,96	11,969	+9,6637	+8,3116	,0781	,9042	197	+,021	+ ,02
1601	2	+10 45 12,04	11,978	+9,7597	+9,0478	+1,0784	+9,9040	201	+,004	— ,09
1602	2	+33 28 3,15	11,988	+9,9052	+8,5185	,0787	,9038	204	+,016	— ,02
1603	2	— 2 36 39,90	12,002	+9,5977	—8,4340	,0792	,9036	202	+,010	,00
1604	3	+ 2 44 38,44	12,038	+9,6730	+8,4623	,0806	,9028	205	+,004	— ,14
1605	3	+10 46 44,33	12,048	+9,7308	+9,0510	,0809	,9026	206	+,023	+ ,23
1606	2	+56 13 33,05	12,053	+9,9566	+9,6989	+1,0811	+9,9025	217	+,009	+ ,08
1607	4	+ 1 55 55,95	12,104	+9,6637	+8,3128	,0829	,9015	214	+,013	— ,03
1608	3	— 1 52 37,81	12,127	+9,6180	—8,2947	,0838	,9010	216	+,010	— ,07
1609	2	+59 52 3,01	12,118	+9,9576	+9,7185	,0834	,9012	222	+,007	— ,22
1610	2	+49 12 38,91	12,156	+9,9469	+9,6620	,0848	,9004	226	+,002	— ,12
1611	2	—17 37 56,02	12,174	+9,2380	—9,2644	+1,0854	+9,9000	218	+,008	— ,01
1612	3	— 4 57 0,35	12,178	+9,5611	—8,7181	,0856	,8999	221	+,009	— ,17
1613	3	+48 36 54,78	12,178	+9,9460	+9,6590	,0856	,8999	230	+,016	,00
1614	2	+51 17 28,89	12,211	+9,9494	+9,6771	,0867	,8993	236	+,011	+ ,07
1615	2	+12 31 25,58	12,229	+9,7752	+9,1219	,0874	,8989	231	—,001	— ,02
1616	2	—15 32 47,39	12,234	+9,3139	—9,2134	+1,0876	+9,8987	229	+,009	— ,13
1617	2	+12 45 25,18	12,253	+9,7767	+9,1306	,0882	,8984	235	+,024	— ,03
1618	2	+61 10 48,83	12,263	+9,9552	+9,7292	,0885	,8982	252	+,020	+ ,04
1619	2	+ 7 57 2,56	12,276	+9,7324	+8,9298	,0890	,8979	238	+,021	— ,13
1620	1	+30 0 20,18	12,312	+9,8670	+9,4876	,0903	,8971	249	+,004	— ,17

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan 1, 1836.	Annual Preces-sion.	Logarithms of a	b	c	d
				h. m. s.	s				
1621	Delphini	7	1	20 31 28,43	+2,780	+8,6279	—8,7367	+0,4440	+8,0488
1622	Aquarii	7	2	31 39,80	3,127	8,6134	8,7214	0,4951	—7,3602
1623	Delphini	7.8	2	31 45,57	2,829	8,6240	8,7314	0,4516	+7,9689
1624	———	7	2	32 0,13	2,921	8,6179	8,7243	0,4655	+7,7551
1625	Cephei	7		32	0,179	9,0790	9,1859	9,2528	+7,0519
1626	Delphini	7.8	2	32 8,12	2,828	+8,6251	—8,7310	+0,4515	+7,9722
1627	———	8	2	32 8,57	2,830	,6249	,7308	,4518	+7,9687
1628	Aquarii	8.9	2	32 47,87	3,282	,6246	,7278	,5292	—7,9248
1629	———	8	1	33 20,34	3,115	,6174	,7186	,4935	—7,2713
1630	Delphini	7	2	33 22,97	2,748	,6363	,7376	,4390	+8,1023
1631	Vulpeculæ	8	1	33 40,21	2,569	+8,6623	—8,7628	+0,4098	+8,2966
1632	Acquarii	8	2	33 42,71	3,281	,6268	,7264	,5160	—7,9276
1633	Delphini	7.8	1	33 51,45	2,865	,6264	,7253	,4571	+7,9070
1634	Capricorni	8	2	34 4,60	3,586	,6667	,7648	,5546	—8,3147
1635	Delphini	8	1	34 11,63	2,823	,6305	,7286	,4507	+7,9896
1636	Delphini	9		35	2,778	+8,6371	—8,7318	+0,4437	+8,0654
1637	Cygni	7.8	1	35 15,49	2,341	,7078	,8018	,3694	+8,4661
1638	Delphini	7.8	2	35 29,41	3,004	,6228	,7157	,4777	+7,4085
1639	Cygni	7.8	1	35 57,04	2,344	,7090	,8003	,3700	+8,4663
1640	Vulpeculæ	8.9	2	36 16,25	2,579	,6673	,7574	,4114	+8,2973
1641	Delphini	7.8	2	36 27,77	2,751	+8,6436	—8,7329	+0,4395	+8,1095
1642	Aquarii			36	3,058	,6245	8,7133	0,4854	+6,6067
1643	Cephei	8	1	37 2,70	0,891	,9923	9,0798	9,9499	+8,9481
1644	Aquarii	8.9	1	37 8,04	3,232	,6313	8,7178	0,5095	—7,8272
1645	Delphini	8	2	37 45,12	2,866	,6354	8,7196	0,4573	+7,9186
1646	Vulpeculæ	8.9	2	38 25,76	2,576	+8,6733	—8,7552	+0,4109	+8,3081
1647	Cygni	8	1	39 3,30	2,473	,6930	8,7723	,3932	+8,3931
1648	Cephei	7.8	2	39 26,48	1,074	,9705	9,0488	,0310	+8,9196
1649	———	7	2	39 42,30	1,089	,9689	9,0461	,0370	+8,9174
1650	Capricorni	8	2	40 2,09	3,308	,6442	8,7194	,5196	—8,0028
1651	Cephei	7.8	3	40 23,75	1,094	+8,9706	—9,0450	+0,0390	+8,9190
1652	Vulpeculæ	8	2	40 43,78	2,579	,6789	8,7516	,4114	+8,3145
1653	Equulei	8	2	40 57,54	2,970	,6367	8,7082	,4728	+7,6182
1654	Vulpeculæ	8	2	41 11,43	2,575	,6808	8,7516	,4108	+8,3198
1655	Aquarii	7.8	3	41 40,93	3,035	,6365	8,7053	,4822	+7,1465
1656	Cephei			43	1,624	+8,8803	—8,9442	+0,2106	+8,7936
1657	Aquarii	8.9	1	43 10,54	3,163	,6415	,7046	,5001	—7,6137
1658	Capricorni	8.9	2	43 37,33	3,372	,6594	,7208	,5279	—8,1195
1659	Aquarii	9	2	43 40,55	3,162	,6424	,7038	,5000	—7,6079
1660	———	8.9	2	43 47,97	3,135	,6418	,7027	,4962	—7,4650
1661	Aquarii	8.9	2	43 50,64	3,081	+8,6409	—8,7017	+0,4887	—6,7381
1662	Equulei	7	1	43 59,75	2,945	,6445	,7046	,4691	+7,7294
1663	Capricorni	8	2	44 10,38	3,579	,6915	,7508	,5538	—8,3473
1664	Delphini	7.8	1	44 26,29	2,888	,6490	,7075	,4606	+7,8943
1665	Vulpeculæ	7	2	44 30,79	2,541	,6950	,7532	,4050	+8,3615

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of				Piazzi No.	Annual P. M.	
				a′	b′	c′	d′		A. R.	Decn.
		° ″ ′	″						s	″
1621	3	+15 15 57,88	+12,313	+9,7973	+9,2093	+1,0903	+9,8971	247	+,001	— ,09
1622	2	— 3 13 30,85	12,326	+9,5899	—8,5357	,0908	,8968	246	+,006	— ,08
1623	3	+12 45 25,38	12,336	+9,7760	+9,1341	,0911	,8966	251	+,012	—1,18
1624	2	+ 7 52 24,31	12,354	+9,7308	+8,9270	,0918	,8962	253	+,005	— ,11
1625	1	+69 58 5,08	12,344	+9,9489	+9,7624	,0915	,8964	265		— ,19
1626	2	+12 50 44,84	12,363	+9,7767	+9,1373	+1,0921	+9,8960	255	+,008	— ,01
1627	1	+12 43 51,01	12,363	+9,7760	+9,1339	,0921	,8960	256	+,010	— ,06
1628	3	—11 31 23,59	12,409	+9,4314	—9,0920	,0937	,8950	259	+,012	— ,07
1629	2	— 2 35 56,19	12,445	+9,6010	—8,4469	,0950	,8942	260	+,016	— ,04
1630	3	+16 59 35,22	12,445	+9,8089	+9,2590	,0950	,8942	261	+,017	+ ,06
1631	2	+25 30 3,67	12,467	+9,8621	+9,4281	+1,0958	+9,8937	268	+,014	— ,10
1632	1	—11 33 1,73	12,473	+9,4314	—9,0949	,0960	,8936	262	+,008	— ,05
1633	2	+10 59 13,50	12,487	+9,7597	+9,0751	,0964	,8933	269	+,016	— ,11
1634	2	—26 24 35,19	12,500	+8,6232	—9,4429	,0969	,8930	266	+,006	— ,10
1635	1	+13 12 33,56	12,500	+9,7789	+9,1541	,0969	,8930	271	+,012	— ,05
1636	2	+15 32 43,07	12,559	+9,7973	+9,2252	+1,0990	+9,8917	275		— ,09
1637	2	+34 57 35,89	12,573	+9,9036	+9,5557	,0994	,8914	278	+,036	— ,17
1638	3	+ 3 29 35,06	12,591	+9,6812	+8,5838	,1001	,8910	277	+,010	— ,07
1639	3	+34 52 13,94	12,618	+9,9031	+9,5564	,1010	,8904	283	+,005	— ,20
1640		+25 14	12,641	+9,8591	+9,4298	,1018	,8899	287	+,001	
1641	2	+16 59 6,16	12,654	+9,8075	+9,2662	+1,1022	+9,8896	288	+,015	+ ,02
1642		+ 0 32	12,663	+9,6444	+7,7828	,1025	,8894	286		
1643	3	+64 33 42,20	12,686	+9,9474	+9,7571	,1033	,8889	295	+,000	— ,02
1644	1	— 9 2 42,54	12,703	+9,4885	—8,9979	,1039	,8884	290	+,011	+ ,15
1645	3	+11 3 6,10	12,745	+9,7589	+9,0865	,1053	,8875	292	+,026	— ,09
1646	3	+25 30 44,69	12,785	+9,8591	+9,4395	+1,1067	+9,8866	300	+,010	— ,11
1647	2	+30 3 46,82	12,830	+9,8808	+9,5063	,1082	,8855	308	+,007	— ,15
1648	2	+62 45 37,85	12,848	+9,9450	+9,7559	,1088	,8851	315	+,046	— ,07
1649	1	+62 37 31,58	12,866	+9,9445	+9,7559	,1094	,8847	317	+,005	+ ,27
1650	4	—13 12 37,16	12,902	+9,3927	—9,1673	,1106	,8838	311	+,002	+ ,04
1651	3	+62 37 0,18	12,915	+9,9440	+9,7576	+1,1111	+9,8835	326	+,006	+ ,05
1652	3	+25 34 41,00	12,947	+9,8579	+9,4457	,1121	,8829	319	—,001	— ,09
1653	3	+ 5 28 54,25	12,963	+9,7033	+8,7923	,1127	,8823	318	+,013	— ,12
1654	2	+25 47 37,91	12,978	+9,8591	+9,4502	,1132	,8820	324	+,000	— ,06
1655	2	+ 1 49 46,15	13,014	+9,6618	+8,3214	,1144	,8811	327	+,007	— ,10
1656		+54 57	13,102	+9,9390	+9,7285	+1,1172	+9,8791	349		
1657	3	— 5 24 22,17	13,110	+9,5575	—8,7879	,1176	,8788	340	+,017	— ,21
1658	2	—16 46 29,83	13,141	+9,2945	—9,2768	,1186	,8780	343	+,012	+ ,22
1659	3	— 5 18 52,13	13,141	+9,5587	—8,7822	,1186	,8780	344	+,019	— ,16
1660	2	— 3 49 45,75	13,148	+9,5821	—8,6402	,1189	,8778	346	+,016	— ,06
1661	2	— 0 43 50,53	13,149	+9,6284	—7,9141	+1,1189	+9,8778	347	+,013	— ,11
1662	2	+ 6 58 22,33	13,163	+9,7185	+8,9022	,1193	,8774	352	+,010	— ,01
1663	2	—26 55 47,12	13,176	+8,6628	—9,4736	,1198	,8771	348	+,013	— ,15
1664	1	+10 7 8,29	13,189	+9,7474	+9,0636	,1202	,8768	354	+,017	— ,16
1665	1	+27 38 23,36	13,193	+9,8651	+9,4850	,1204	,8767	358	+,013	— ,04

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	s.				
1666	Equulei *pre.*	8.9	4	20 44 38,92	+2,949	+8,6456	—8,7034	+0,4697	+7,7147
1667	——— *seq.*	9	2	44 40,06	2,950	,6457	,7032	,4698	+7,7138
1668	Capricorni	7.8	1	44 41,46	3,562	,6899	,7472	,5517	—8,3346
1669	Aquarii	6.7		45	3,200	,6476	,7031	,5051	—7,7623
1670	———	7.8	2	45 26,54	3,158	,6461	,7008	,4994	—7,5992
1671	Capricorni	8.9	1	45 36,74	3,572	+8,6939	—8,7476	+0,5529	—8,3467
1672	Cephei	8	1	45 37,24	0,408	9,0970	9,1517	9,6107	+9,0681
1673	Microscopii	8.9	2	45 45,54	3,697	8,7175	8,7707	0,5678	—8,4435
1674	Capricorni	8	1	45 47,41	3,353	8,6621	8,7153	0,5254	—8,0998
1675	Equulei	7.8	1	45 54,05	3,010	8,6461	8,6990	0,4786	+7,4127
1676	Aquarii	8	1	46 18,58	3,204	+8,6503	—8,7015	+0,5057	—7,7820
1677	Delphini	9.10		46	2,877	,6548	,7047	,4589	+7,9289
1678	Aquarii	8	1	46 48,48	3,047	,6474	,6968	,4839	+6,9684
1679	Equulei	7.8	2	47 3,42	2,947	,6510	,6994	,4694	+7,7318
1680	Capricorni	8.9	1	47 35,47	3,362	,6673	,7134	,5266	—8,1199
1681	Equulei	8	2	47 44,40	2,944	+8,6526	—8,6984	+0,4689	+7,7426
1682	Capricorni	9	1	48 0,27	3,367	,6689	,7134	,5272	—8,1294
1683	Aquarii	8	1	48 19,74	3,191	,6539	,6974	,5039	—7,7449
1684	Microscopii	8	2	48 25,80	3,694	,7239	,7669	,5675	—8,4519
1685	Aquarii	7.8	2	48 27,53	3,049	,6509	,6939	,4842	+6,9407
1686	Aquarii	7	2	48 55,60	3,135	+8,6528	—8,6940	+0,4962	—7,4796
1687	Cephei	7.8	3	49 43,73	1,447	,9376	,9763	,1605	+8,8693
1688	Aquarii	7	2	50 10,02	3,144	,6556	,6923	,4975	—7,5454
1689	Capricorni	8	2	50 14,43	3,378	,6750	,7114	,5287	—8,1531
1690	Aquarii	8	2	50 15,61	3,136	,6556	,6917	,4964	—7,4919
1691	Capricorni	7.8	3	50 32,12	3,589	+8,7092	—8,7441	+0,5550	—8,3803
1692	Cygni	8	2	50 56,18	2,453	,7306	,7645	,3897	+8,4928
1693	Aquarii	9.10		51	3,096	,6569	,6890	,4908	—7,1118
1694	———	8	3	52 0,97	3,170	,6605	,6900	,5011	—7,6785
1695	Cygni	8	2	52 20,97	2,228	,7791	,8077	,3479	+8,5937
1696	Cygni	8	2	52 21,79	2,247	+8,7748	—8,8034	+0,3516	+8,5835
1697	Delphini	7.8	2	52 36,72	2,907	,6638	,6936	,4634	+7,8753
1698	———	9	5	52 47,64	2,907	,6654	,6922	,4634	+7,8769
1699	Equulei	8	2	53 24,37	2,957	,6638	,6880	,4708	+7,7209
1700	Aquarii	8	1	53 35,82	3,271	,6706	,6941	,5147	—7,9813
1701	Equulei	7.8	2	53 39,84	3,535	+8,7067	—8,7299	+0,5484	—8,3438
1702	Vulpeculæ	8	2	54 25,22	2,707	,6913	,7118	,4325	+8,2353
1703	Aquarii	7.8	2	54 32,45	3,094	,6633	,6833	,4905	—7,0955
1704	Capricorni	7.8	3	54 45,98	3,395	,6873	,7063	,5308	—8,1941
1705	Aquarii	8.9	3	54 59,28	3,184	,6672	,6854	,5030	—7,7448
1706	Microscopii	7.8	1	55 55,65	3,933	+8,7951	—8,8095	+0,5947	—8,6208
1707	Vulpeculæ	7	2	55 56,84	2,649	,7215	,7361	,4064	+8,3983
1708	Cygni	7	2	56 3,90	2,294	,7748	,7893	,3606	+8,5726
1709	Equulei	7	2	56 24,65	3,030	,6672	,6801	,4814	+7,2738
1710	Vulpeculæ	8	2	56 30,61	2,548	,7229	,7356	,4062	+8,4011

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s.	″
1666	2	+ 6 43 6,30	+13,203	+9,7152	+8,8878	+1,1206	+9,8765	355	+,019	+ ,03
1667	2	+ 6 42 31,27	13,207	+9,7152	+8,8869	,1208	,8763	356	—,060	— ,04
1668	2	—26 11 24,36	13,211	+8,7559	—9,4636	,1209	,8762	353	+,033	— ,12
1669	1	— 7 30 13,48	13,242	+9,5211	—8,9347	,1219	,8755	360		— ,09
1770	2	— 5 9 35,68	13,255	+9,5623	—8,7735	,1224	,8751	364	+,001	— ,16
1671	2	—26 43 48,23	13,273	+8,7076	—9,4738	+1,1229	+9,8747	361	+,082	— ,08
1672		+69 19	13,255	+9,9320	+9,7916	,1224	,8751	374	+,057	
1673	2	—32 10 16,42	13,281	—8,4914	—9,5473	,1232	,8745	363	+,007	— ,04
1674	1	—15 54 2,98	13,281	+9,3243	—9,2589	,1232	,8745	367	+,007	— ,14
1675	2	+ 3 20 17,42	13,286	+9,6785	+8,5881	,1234	,8743	368	+,011	— ,17
1676		— 7 47	13,317	+9,5172	—8,9541	+1,1244	+9,8736	369	+,014	
1677		+10 49	13,337	+9,7528	+9,0972	,1251	,8730	371		
1678		+ 1 12	13,347	+9,6532	+8,1444	,1254	,8728	372	+,008	
1679	2	+ 6 54 38,17	13,363	+9,7168	+8,9047	,1259	,8723	373	+,012	— ,02
1680	2	—16 28 28,75	13,406	+9,3117	—9,2778	,1273	,8713	375	+,009	,00
1681	1	+ 7 2 50,39	13,407	+9,7185	+8,9154	+1,1273	+9,8712	378	+,002	— ,09
1682	2	—16 47 49,95	13,428	+9,3032	—9,2866	,1280	,8706	377	+,018	— ,05
1683	2	— 7 5 42,19	13,446	+9,5302	—8,9176	,1286	,8702	385	+,013	,00
1684	2	—32 19 50,86	13,455	—8,4624	—9,5549	,1289	,8699	384	+,020	— ,10
1685	2	+ 1 6 0,14	13,455	+9,6513	+8,1167	,1289	,8699	388	+,009	— ,16
1686	2	— 3 51 42,72	13,485	+9,5832	—8,6549	+1,1298	+9,8691	390	+,013	+ ,01
1687	4	+58 41 11,27	13,532	+9,9325	+9,7610	,1312	,8680	400	+,015	+ ,06
1688	3	— 4 28 20,48	13,563	+9,5752	—8,7202	,1323	,8670	396	+,007	— ,06
1689	2	—17 30 34,75	13,567	+9,2878	—9,3086	,1325	,8669	394	+,027	+ ,06
1690	3	— 3 56 47,59	13,572	+9,5821	—8,6669	,1326	,8668	397	+,014	— ,10
1691	3	—27 58 20,14	13,588	+8,5798	—9,5025	+1,1333	+9,8662	398	+,015	— ,11
1692	3	+32 40 18,40	13,610	+9,8814	+9,5643	,1338	,8658	407	+,016	+ ,03
1693		— 1 38	13,640	+9,6170	—8,2877	,1348	,8649	408		
1694	4	— 5 59 35,66	13,682	+9,5514	—8,8522	,1362	,8638	416	+,008	— ,11
1695	3	+40 43 30,40	13,699	+9,9058	+9,6493	,1367	,8633	420	+,020	+ ,03
1696	3	+40 3 53,26	13,699	+9,9042	+9,6434	+1,1367	+9,8633	421	+,011	— ,12
1697	2	+ 9 21 26,93	13,677	+9,7380	+9,0456	,1360	,8639	419	+,018	— ,09
1698	1	+ 9 21 33,13	13,729	+9,7380	+9,0472	,1376	,8625	422	+,015	— ,05
1699	1	+ 6 31 40,30	13,772	+9,7110	+8,8942	,1390	,8613	427	+,010	— ,06
1700	3	—11 49 14,38	13,784	+9,4425	—9,1481	,1394	,8609	426	+,019	— ,08
1701	3	—25 42 57,50	13,788	+8,8808	—9,4747	+1,1395	+9,8608	425	+,019	— ,13
1702	2	+20 27 48,98	13,835	+9,8189	+9,3830	,1410	,8595	434	+,019	— ,03
1703	3	— 1 33 57,23	13,843	+9,6180	—8,2714	,1412	,8592	432	+,005	+ ,06
1704	2	—18 45 13,89	13,860	+9,2528	—9,3465	,1418	,8588	433	+,003	,00
1705	2	— 6 52 56,19	13,873	+9,5378	—8,9178	,1422	,8584	438	+,014	+ ,05
1706	1	—42 1 58,26	13,936	—9,2014	—9,6678	+1,1441	+9,8566	442	—,037	— ,15
1707	1	+28 20 28,68	13,932	+9,8591	+9,5188	,1440	,8567	447	+,009	— ,06
1708	2	+38 51 55,43	13,935	+9,8971	+9,6399	,1441	,8566	452	—,002	— ,02
1709	1	+ 2 17 42,30	13,961	+9,6656	+8,4496	,1449	,8558	448	+ 014	,00
1710	2	+28 26 46,02	13,965	+9,8591	+9,5213	,1450	,8557	453	—,001	— ,25

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Precession.	Logarithms of *a*	*b*	*c*	*d*
				h. m. s.	s.				
1711	Cygni	6.7	2	20 56 43,35	+2,319	+8,7710	—8,7829	+0,3653	+8,5607
1712	Vulpeculæ			57	2,659	,7047	,7151	,4247	+8,2998
1713	Microscopii	7.8	2	57 44,84	3,657	,7397	,7473	,5631	—8,4603
1714	Vulpeculæ	8	3	57 56,95	2,664	,7056	,7129	,4255	+8,2968
1715	Capricorni	8	2	58 0,52	3,352	,6885	,6953	,5253	—8,1448
1716	Capricorni	7.8	2	58 5,15	3,348	+8,6882	—8,6945	+0,5248	—8,1386
1717	———	7	2	58 11,98	3,409	,6996	,7027	,5327	—8,2251
1718	Vulpeculæ	7	2	58 30,28	2,553	,7268	,7319	,4070	+8,4050
1719	Capricorni	8	3	58 50,57	3,345	,6894	,6929	,5240	—8,1367
1720	Aquarii	7	2	59 2,10	3,171	,6744	,6775	,5012	—7,7090
1721	Equulei	8	3	59 5,41	3,010	+8,6728	—8,6756	+0,4786	+7,4585
1722	Vulpeculæ	8	1	59 15,43	2,600	,7196	,7219	,4150	+8,3659
1723	Cygni	8	2	59 32,25	2,310	,7803	,7816	,3636	+8,5762
1724	Vulpeculæ	8.9	1	21 0 7,12	2,672	,7092	,7082	,4268	+8,2972
1725	Microscopii	7.8	2	0 14,18	3,620	,7383	,7365	,5587	—8,4418
1726	Capricorni	7.8	2	0 14,71	3,361	+8,6943	—8,6925	+0,5265	—8,1663
1727	Equulei	7	2	0 22,08	2,963	,6771	,6751	,4717	+7,7220
1728	Cygni	8	1	0 33,47	1,863	,8851	,8826	,2702	+8,7816
1729	Microscopii	7.8	2	0 42,01	3,592	,7339	,7304	,5553	—8,4213
1730	Cygni	9	1	0 49,48	2,310	,7839	,7801	,3636	+8,5813
1731	Capricorni	8	1	1 1,26	3,344	+8,6936	—8,6890	+0,5243	—8,1431
1732	Equulei	9	1	1 10,65	3,010	,6769	,6717	,4786	+7,4647
1733	Cygni	8		1	2,060	,8435	,8370	,3139	+8,7083
1734	Equulei	8	3	1 41,03	3,030	,6772	,6702	,4814	+7,2807
1735	Aquarii	7.8	2	1 56,21	3,233	,6840	,6760	,5096	—7,9237
1736	Cygni	8	2	2 12,88	2,534	+8,7391	—8,7302	+0,4038	+8,4345
1737	Equulei	8	1	2 16,77	2,902	,6847	,6756	,4627	+7,9279
1738	Piscis Aust.			2	3,562	,7324	,7217	,5517	—8,4028
1739	Capricorni	8	1	2 42,60	3,426	,7087	,6976	,5348	—8,2627
1740	Aquarii	7.8	1	3 1,96	3,321	,6950	,6826	,5213	—8,1136
1741	Cygni	7.8	2	3 8,87	2,601	+8,7285	—8,7158	+0,4151	+8,3802
1742	Aquarii	9.10	2	4 4,02	3,195	,6854	,6692	,5045	—7,8180
1743	Picis Aust.	7.8	2	4 9,29	3,610	,7453	,7289	,5575	—8,4484
1744	Equulei	7.8	2	4 18,57	2,886	,6899	,6730	,4603	+7,9757
1745	Cygni	7.8	2	4 19,39	2,598	,7314	,7145	,4146	+8,3870
1746	Vulpeculæ	8	2	4 23,94	2,676	+8,7177	—8,7003	+0,4275	+8,3084
1747	———	8	2	4 33,93	2,686	,7164	,6984	,4291	+8,2980
1748	Capricorni	8.9	3	4 38,20	3,418	,7115	,6930	,5338	—8,2605
1749	Aquarii	7.8	1	4 49,80	3,174	,6856	,6664	,5016	—7,7439
1750	Cygni	6	2	5 11,60	1,847	,9030	,8827	,2665	+8,8048
1751	Equulei	8	3	5 25,39	2,896	+8,6911	—8,6699	+0,4618	+7,9538
1752	Capricorni	8.9	2	5 37,72	3,429	,7153	,6931	,5352	—8,2781
1753	———	7	1	5 38,68	3,449	,7185	,6963	,5377	—8,3007
1754	Equulei	9	2	6 17,44	2,897	,6921	,6688	,4619	+7,9534
1755	Aquarii	8	2	7 0,29	3,226	,6931	,6655	,5087	—7,9233

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	Logarithms of b′	Logarithms of c′	Logarithms of d′	Piazzi No.	Annual P. M. A. R.	Annual P. M. Decn.
		° ′ ″	″						s.	″
1711	1	+38 0 43,46	+13,970	+9,8938	+9,6331	+1,1454	+9,8553	455	+,017	— ,02
1712	1	+23 10 32,99	14,002	+9,8331	+9,4394	,1462	,8546	457		+ ,15
1713	2	—31 42 50,84	14,048	—7,7781	—9,5662	,1476	,8532	459	+,025	+ ,09
1714	2	+22 57 2,58	14,053	+9,8312	+9,4371	,1478	,8531	464	+,011	— ,02
1715	2	—16 37 27,31	14,061	—9,3263	—9,3024	,1480	,8529	460	+,027	+ ,03
1716	3	—16 23 37,58	14,069	+9,3324	—9,2966	+1,1483	+9,8526	461	—,008	— ,09
1717	3	—19 44 23,89	14,074	+9,2253	—9,3749	,1484	,8525	462	—,005	— ,11
1718	1	+28 26 44,01	14,090	+9,8573	+9,5251	,1489	,8520	467	+,003	— ,04
1719	3	—16 16 42,57	14,114	+9,3385	—9,2950	,1497	,8512	466	+,005	— ,11
1720	3	— 6 13 52,45	14,123	+9,5490	—8,8825	,1499	,8510	470	+,025	+ ,12
1721	4	+ 3 29 15,68	14,127	+9,6776	+8,6338	+1,1501	+98509	471	+,009	— ,06
1722	1	+26 16 21,32	14,136	+9,8470	+9,4946	,1503	,8506	473	+,008	+ ,05
1723	1	+38 40 22,47	14,152	+9,8932	+9,6447	,1508	,8501	480	—,003	— ,01
1724		+22 45	14,189	+9,8280	+9,4380	,1520	,8490	482	+,015	
1725	3	—30 22 54,92	14,202	+8,2553	—9,5539	,1523	,8486	477	—,009	— ,15
1726	1	—17 16 32,16	14,205	+9,3117	—9,3225	+1,1523	+9,8486	481	+,010	— ,07
1727	2	+ 6 19 54,93	14,206	+9,7067	+8,8954	,1525	,8485	484	+,010	+ ,03
1728	1	+51 57 56,48	14,214	+9,9149	+9,7472	,1527	,8482	490	—,011	00
1729	2	—29 9 6,09	14,231	+8,5563	—9,5386	,1532	,8477	483	+,014	— ,06
1730	1	+38 50 25,45	14,234	+9,8921	+9,6488	,1533	,8476	489	—,002	+ ,07
1731	2	—16 21 40,79	14,247	+9,3385	—9,3012	+1,1537	+9,8472	487	+,010	— ,10
1732	2	+ 3 30 5,39	14,262	+9,6776	+8,6399	,1542	,8469	488	+,016	— ,03
1733	1	+47 4 34,33	14,279	+9,9079	+9,7175	,1547	,8462	3		+ ,05
1734	3	+ 2 16 51,98	14,288	+9,6646	+8,4565	,1550	,8459	492	+,015	— ,03
1735	3	—11 0 56,43	14,304	+9,4843	—9,0932	,1556	,8454	493	+,017	— ,23
1736	2	+29 42 48,76	14,317	+9,8597	+9,5493	+1,1558	+9,8450	9	+,027	— ,11
1737	1	+10 4 26,64	14,321	+9,7396	+9,0972	,1560	,8449	5	+,037	— ,16
1738		—27 56	14,345	+8,7482	—9,5251	,1567	,8441	4		
1739	2	—20 59 50,06	14,353	+9,1903	—9,4090	,1569	,8438	8	+,028	— ,08
1740	2	—15 13 34,65	14,373	+9,3729	—9,2742	,1576	,8432	11	+,015	— ,16
1741	2	+26 38 11,84	14,378	+9,8451	+9,5075	+1,1577	+9,8431	13	+,006	00
1742		— 7 49	14,433	+9,5263	—8,9900	,1594	,8412	16	+,003	
1743	3	—30 19 59,96	14,437	+8,3979	—9,5606	,1595	,8411	14	+,045	— ,15
1744	2	+11 6 50,64	14,447	+9,7482	+9,1436	,1598	,8408	19	+,014	— ,02
1745	2	+26 53 13,97	14,447	+9,8457	+9,5133	,1598	,8408	22	+,008	+ ,03
1746	2	+22 55 1,35	14,450	+9,8261	+9,4487	+1,1600	+9,8406	23	+,003	— ,05
1747	2	+22 24 52,64	14,463	+9,8228	+9,4399	,1602	,8403	25	+,019	— ,02
1748	2	—20 45 40,16	14,471	+9,2068	—9,4075	,1605	,8401	20	+,004	— ,16
1749	2	— 6 34 56,54	14,483	+9,5465	—8,9171	,1608	,8398	24	+,002	— ,01
1750	2	+52 53 44,18	14,498	+9,9101	+9,7612	,1613	,8391	32	+,013	— ,07
1751	2	+10 32 25,18	14,515	+9,7435	+9,1225	+1,1618	+9,8386	29	+,031	— ,11
1752	3	—21 27 28,06	14,531	+9,1818	—9,4231	,1623	,8381	28	—,001	— ,11
1753	2	—22 29 18,34	14,531	+9,1399	—9,4425	,1623	,8381	27	+,010	— ,07
1754	2	+10 30 44,52	14,547	+9,7427	+9,1221	,1628	,8375	36	—,007	— ,13
1755	2	— 9 47 55,74	14,615	+9,4941	—9,0931	,1648	,8353	39	—,002	— ,20

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Precession.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	s.				
1756	Aquarii	8	2	21 7 5,87	+3,230	+8,6936	—8,6658	+0,5092	—7,9354
1757	Capricorni	7	1	7 21,29	3,415	,7167	,6879	,5334	—8,2677
1758	Piscis Aust.	7	2	7 33,45	3,625	,7564	,7269	,5593	—8,4733
1759	Cephei	6.7	1	7 37,37	1,530	,9797	,9504	,1847	+8,9142
1760	Equulei	7	2	8 5,14	2,907	,6952	,6638	,4634	+7,9356
1761	Equulei	8	2	8 11,09	2,903	+8,6957	—8,6639	+0,4628	+7,9467
1762	———	7.8	2	8 34,70	2,995	,6908	,6574	,4764	+7,5934
1763	Cephei	7.8	2	8 36,71	1,529	,9832	,9501	,1844	+8,9183
1764	Piscis Aust.	7	1	9 12,16	3,579	,7506	,7147	,5538	—8,4421
1765	Cygni	7	1	9 13,11	2,271	,8150	,7796	,3562	+8,6351
1766	Pegasi	8.9	1	9 29,18	2,769	+8,7135	—8,6768	+0,4423	+8,2104
1767	Aquarii	7.8	1	9 33,42	3,275	,7022	,6653	,5152	—8,0515
1768	Piscis Aust.	7.8	2	10 12,35	3,544	,7458	,7063	,5495	—8,4155
1769	Pegasi	7.8	2	10 17,98	2,793	,7117	,6720	,4461	+8,1768
1770	Equulei	7	2	10 33,73	2,937	,6974	,6566	,4679	+7,8568
1771	Pegasi	7.8	1	10 45,67	2,792	+8,7127	—8,6712	+0,4459	+8,1798
1772	———	8	1	10 54,35	2,788	,7135	,6715	,4453	+8,1872
1773	Aquarii	7.8	1	11 1,97	3,165	,6962	,6535	,5004	—7,7261
1774	Pegasi	7	2	11 33,06	2,792	,7143	,6697	,4459	+8,1839
1775	Cygni	7.8	2	11 58,93	2,572	,7538	,7075	,4103	+8,4403
1776	Piscis Aust.	7.8	2	12 4,51	3,580	+8,7573	—8,7105	+0,5539	—8,4541
1777	Aquarii	8	2	12 10,25	3,101	,6960	,6489	,4915	—7,2634
1778	Cephei	7.8	2	12 20,16	1,788	,9386	,8913	,2524	+8,8527
1779	Aquarii	7.8	2	12 35,90	3,259	,7061	,6575	,5131	—8,0281
1780	Equulei	7.8	3	13 47,58	3,011	,6991	,6462	,4787	+7,5050
1781	Pegasi	7	2	13 58,29	2,699	+8,7321	—8,6784	+0,4312	+8,3097
1782	Equulei	7·8	3	13 59,07	3,009	,6995	,6458	,4784	+7,5228
1783	Aquarii	8	3	14 16,10	3,133	,7003	,6453	,4960	—7,5668
1784	Pegasi	8.9	2	14 35,72	2,691	,7350	,6801	,4299	+8,3306
1785	Capricorni	7.8	2	14 42,37	3,502	,7471	,6904	,5443	—8,3926
1786	Capricorni	7	3	14 51,35	3,480	+8,7432	—8,6860	+0,5416	—8,3708
1787	———	8.9	2	14 57,01	3,459	,7396	,6816	,5389	—8,3484
1788	Aquarii	9	3	15 47,00	3,262	,7120	,6512	,5135	—8,0456
1789	Capricorni	8	2	16 16,90	3,493	,7486	,6857	,5432	—8,3891
1790	Cygni	7.8	1	16 25,92	2,328	,8199	,7570	,3670	+8,6302
1791	Aquarii	7.8	2	16 37,17	3,108	+8,7036	—8,6394	+0,4925	—7,3713
1792	Capricorni	8	2	16 39,41	3,478	8,7464	8,6823	+0,5413	—8,3751
1793	Cephei	9	2	17 20,93	1,746	8,9639	8,8975	+0,2420	+8,8858
1794	———	7	1	17 22,07	—0,514	9,3303	9,2647	—9,7110	+9,3179
1795	Piscis Aust.	8	2	17 54,77	+3,537	8,7609	8,6918	+0,5486	—8,4381
1796	Capricorni	7.8	2	18 13,88	3,398	+8,7353	—8,6650	+0,5312	—8,2876
1797	Aquarii	8	2	18 24,93	3,288	,7195	,6487	,5169	—8,1112
1798	Capricorni	8.9	2	18 52,02	3,424	,7407	,6681	,5345	—8,3217
1799	Aquarii	8.9	3	19 2,65	3,289	,7207	,6476	,5171	—8,1159
1800	———	7	2	19 11,03	3,261	,7178	,6439	,5133	—8,0571

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s	″
1756	2	−10 4 10,64	+14,619	+9,4885	−9,1048	+1,1649	+9,8351	40	+,001	− ,11
1757	2	−20 51 3,23	14,635	+9,2095	−9,4144	,1654	,8346	41	−,012	− ,18
1758	2	−31 25 31,39	14,647	+8,1461	−9,5806	,1657	,8342	42	+,015	+ ,02
1759		+59 18	14,643	+9,9074	+9,7982	,1656	,8343	51	+,007	
1760	3	+10 0 22,14	14,674	+9,7364	+9,1050	,1666	,8332	48	+,014	− ,18
1761	3	+10 15 3,50	14,682	+9,7388	+9,1158	+1,1668	+9,8330	49	+,002	− ,11
1762	4	+ 4 34 16,80	14,707	+9,6866	+8,7681	,1675	,8321	53	−,002	− ,17
1763	1	+59 25 19,91	14,702	+9,9063	+9,8005	,1674	,8323	61	+,018	− ,09
1764	2	−29 26 49,72	14,746	+8,6532	−9,5581	,1687	,8308	55	+,009	− ,05
1765	2	+41 20 30,88	14,758	+9,8887	+9,6866	,1684	,8311	63	+,016	+ ,25
1766	1	+18 16 51,78	14,757	+9,7952	+9,3640	+1,1690	+9,8304	62	+,002	+ ,07
1767	2	−12 56 50,44	14,762	+9,4346	−9,2165	,1691	,8302	59	+,016	+ ,07
1768	2	−27 53 38,99	14,801	+8,8388	−9,5380	,1703	,8288	65	+,014	+ ,05
1769	3	+16 56 39,91	14,806	+9,7867	+9,3335	,1704	,8287	67	+,020	− ,01
1770	2	+ 8 16 34,31	14,822	+9,7210	+9,0283	,1709	,8282	68	+,034	− ,11
1771	2	+17 2 10,54	14,832	+9,7867	+9,3364	+1,1712	+9,8277	69	−,006	+ ,04
1772	2	+17 18 14,82	14,840	+9,7882	+9,3432	,1714	,8275	73	+,012	− ,02
1773	2	− 6 10 26,72	14,853	+9,5551	−8,8997	,1718	,8270	70	+,007	− ,14
1774	2	+17 8 19,68	14,880	+8,7875	+9,3403	,1726	,8261	77	+,005	+ ,01
1775	2	+29 3 20,74	14,908	+9,8476	+9,5579	,1734	,8251	80	+,010	− ,02
1776	3	−29 51 26,75	14,914	+8,6434	−9,5684	+1,1736	+9,8248	78	+,021	− ,14
1777	2	− 2 8 45,14	14,918	+9,6117	−8,4392	,1737	,8247	79	+,018	− ,14
1778	2	+55 6 35,78	14,923	+9,9009	+9,7859	,1738	,8245	86	+,010	− ,16
1779	3	−12 8 51,70	14,942	+9,4533	−9,1944	,1744	,8238	82	+,015	− ,09
1780	1	+ 3 39 6,51	15,008	+9,6767	+8,6802	,1763	,8214	90	+,009	− ,01
1781	3	+22 11 48,44	15,019	+9,8142	+9,4523	+1,1766	+9,8210	94	+,016	+ ,09
1782	4	+ 3 47 37,85	15,019	+9,6785	+8,6979	,1766	,8210	91	+,022	− ,12
1783	3	− 4 14 26,67	15,038	+9,5843	−8,7417	,1772	,8203	95	+,026	− ,07
1784	1	+23 7 49,13	15,053	+9,8189	+9,4702	,1776	,8197	103	−,010	− ,04
1785	2	−26 15 29,92	15,065	+8,9868	−9,5215	,1780	,8193	96	+,004	− ,05
1786	3	−25 7 15,04	15,073	+9,0531	−9,5038	+1,1782	+9,8190	98	+,030	− ,15
1787	3	−23 59 18,71	15,085	+9,1106	−9,4853	,1785	,8185	101	+,010	− ,02
1788	3	−12 28 41,79	15,127	+9,4518	−9,2114	,1797	,8169	106	+,015	+ ,06
1789	2	−25 56 25,30	15,157	+9,0170	−9,5192	,1806	,8158	108	+,020	− ,02
1790	2	+40 14 2,34	15,158	+9,8774	+9,6890	,1806	,8158	116	+,043	− ,10
1791	3	− 2 41 22,47	15,177	+9,6052	−8,5469	+1,1812	+9,8150	112	+,009	− ,05
1792	2	−25 11 14,40	15,177	+9,0607	−9,5078	,1812	,8150	111	+,013	− ,15
1793	2	+56 38 9,60	15,211	+9,8938	+9,8020	,1821	,8137	124	+,018	+ ,06
1794	2	+76 19 17,97	15,199	+9,8663	+9,8674	,1818	,8142	137	−,064	+ ,08
1795	3	−28 25 52,00	15,248	+8,8633	−9,5585	,1832	,8122	121	+,025	− ,02
1796	2	−20 54 57,07	15,268	+9,2405	−9,4341	+1,1838	+9,8115	123	+,008	− ,11
1797	3	−14 17 40,15	15,275	+9,4166	−9,2737	,1840	,8112	125	+,015	− ,09
1798	3	−22 25 20,78	15,302	+9,1903	−9,4638	,1847	,8102	127	+,017	− ,34
1799	3	−14 24 14,54	15,309	+9,4150	−9,2781	,1849	,8099	128	+,026	− ,12
1800	3	−12 38 10,13	15,320	+9,4502	−9,2226	,1853	,8094	130	−,005	− ,07

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.			Annual Preces-sion.	Logarithms of			
				h.	m.	s.	s.	a	b	c	d
1801	Aquarii	9.10	1	21	19	14,04	+3,263	+8,7182	—8,6440	+0,5136	—8,0625
1802	Cygni	9			19		2,176	,8657	,7915	,3377	+8,7227
1803	Aquarii	8	2		19	23,64	3,115	,7082	,6335	,4935	—7,4435
1804	Cephei	8	2		19	46,00	1,634	,9969	,9213	,2132	+8,9303
1805	Aquarii	7	2		19	49,65	3,121	,7091	,6327	,4943	—7,5030
1806	Aquarii	7.8	1		19	50,04	3,118	+8,7089	—8,6327	+0,4939	—7,4690
1807	———	8.9	3		20	34,66	3,262	,7203	,6410	,5135	—8,0647
1808	———	8.9	3		20	41,10	3,293	,7240	,6445	,5176	—8,1289
1809	Vulpeculæ	8	2		20	56,30	2,635	,7596	,6791	,4208	+8,4149
1810	Capricorni	8	3		20	56,80	3,468	,7531	,6725	,5401	—8,3809
1811	Cygni	6.7	2		21	8,11	2,545	+8,7795	—8,6984	+0,4057	+8,4978
1812	———	6.7	2		21	21,06	1,969	,9231	,8412	,2942	+8,8208
1813	Equulei	8.9	3		22	57,82	2,996	,7146	,6264	,4765	+7,6432
1814	Cephei	8	1		23	43,49	1,878	,9525	,8616	,2737	+8,8643
1815	Aquarii	8	2		23	50,84	3,171	,7178	,6259	,5012	—7,8036
1816	Piscis Aust.	8.9	3		23	52,57	3,526	+8,7710	—8,6791	+0,5473	—8,4508
1817	Capricorni	8	1		23	56,89	3,397	8,7456	8,6534	,5311	—8,3074
1818	Pegasi	7	2		24	24,78	2,710	8,7517	8,6578	,4330	+8,3460
1819	Cephei	8	1		24	26,66	1,189	9,1051	9,0114	,0752	+9,0656
1820	Piscis Aust.	8.9	4		24	32,40	3,524	8,7721	8,6774	,5470	—8,4522
1821	Capricorni	8.9	2		24	37,55	3,279	+8,7290	—8,6343	+0,5157	—8,1172
1822	Pegasi	7.8	2		24	59,74	2,719	,7512	,6549	,4344	+8,3374
1823	Aquarii	8.9	2		25	0,99	3,172	,7196	,6233	,5013	—7,8106
1824	———	8.9	2		25	8,88	3,158	,7189	,6221	,4994	—7,7465
1825	———	8.9	2		25	31,11	3,075	,7171	,6187	,5152	—6,6432
1826	Capricorni	8	1		25	37,89	3,390	+8,7475	—8,6487	+0,5302	—8,3048
1827	———	8	2		25	57,16	3,211	,7240	,6241	,5066	—7,9543
1828	———	8	1		26	8,01	3,369	,7449	,6439	,5275	—8,2775
1829	Cygni	7	2		26	16,12	2,331	,8443	,7433	,3675	+8,6664
1830	Capricorni	7.8	4		27	13,74	3,353	,7441	,6392	,5254	—8,2586
1831	Cephei				27		1,705	+9,0066	—8,9002	+0,2317	+8,9391
1832	Pegasi	7	1		28	2,00	2,707	8,7592	,6512	,4325	+8,3642
1833	Capricorni	7	3		28	11,97	3,353	8,7457	,6370	,5254	—8,2613
1834	Cygni	8	1		28	39,92	2,589	8,7854	,6751	,4131	+8,4883
1835	Piscis Aust.	8	3		28	43,62	3,470	8,7687	,6579	,5403	—8,4129
1836	Capricorni	7.8	2		28	45,39	3,317	+8,7412	—8,6301	+0,5207	—8,2059
1837	Piscis Aust.	8.9	2		28	57,49	3,513	8,7787	,6668	,5457	—8,4588
1838	3 Pegasi *pre.*	8	3		29	33,16	2,984	8,7253	,6113	,4748	+7,7385
1839	Cephei	8			29		1,593	9,0385	,9247	,2022	+8,9806
1840	Capricorni	8.9	2		30	18,35	3,281	8,7387	,6216	,5160	—8,1451
1841	Cephei	7.8	2		30	30,61	1,326	+9,0988	—8,9815	+0,1225	+9,0562
1842	Cygni	7.8	2		31	9,57	2,423	8,8323	,7123	,3843	+8,6274
1843	Pegasi	8	2		31	25,61	3,048	8,7259	,6043	,4810	+7,1190
1844	Cephei	7.8	2		31	33,37	1,350	9,0976	,9763	,1303	+9,0544
1845	Capricorni	7.8	2		32	13,15	3,402	8,7618	,6371	,5317	—8,3473

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s	″
1801	1	—12 47 44,74	+15,323	+9,4472	—9,2277	+1,1854	+9,8093	131	+,013	+ ,10
1802	3	+46 0 5,67	15,323	+9,8837	+9,7405	,1854	,8093	140		— ,55
1803	2	— 3 8 8,28	15,332	+9,5999	—9,6190	,1856	,8090	135	+,031	,00
1804	1	+59 3 16,86	15,348	+9,8893	+9,8174	,1860	,8084	146	+,031	— ,07
1805	3	— 3 35 36,76	15,358	+9,5944	—8,6782	,1863	,8079	139	+,006	+ ,06
1806	3	— 3 19 6,29	15,353	+9,5977	—8,6444	+1,1862	+9,8081	138	+,034	— ,03
1807	3	—12 47 24,75	15,399	+9,4502	—9,2299	,1875	,8062	143	+,013	+ ,17
1808	2	—14 44 14,09	15,402	+9,4099	—9,2905	,1876	,8061	144	+,021	— ,16
1809	2	+26 52 13,23	15,418	+9,8299	+9,5414	,1880	,8055	151	+,009	+ ,23
1810	3	—25 8 31,37	15,418	+9,0864	—9,5139	,1880	,8055	147	+,028	— ,21
1811	2	+31 30 40,74	15,425	+9,8476	+9,6045	+1,1882	+9,8052	153	+,018	+ ,09
1812	3	+52 11 19,23	15,436	+9,8865	+9,7843	,1885	,8047	156	+,042	+ ,01
1813	3	+ 4 51 39,43	15,529	+9,6857	+8,8178	,1911	,8009	163	+,008	— ,19
1814	1	+54 42 7,65	15,565	+9,8837	+9,8020	,1922	,7993	170	+,024	— ,02
1815	3	— 7 1 40,43	15,580	+9,5490	—8,9765	,1926	,7987	167	+,017	— ,03
1816	2	—28 36 27,49	15,580	+8,9031	—9,5704	+1,1926	+9,7987	164	+,032	— ,04
1817	3	—21 23 49,61	15,583	+9,2430	—9,4525	,1927	,7986	165	+,044	+ ,04
1818	2	+23 7 31,68	15,610	+9,8096	+9,4857	,1934	,7975	174	+,007	— ,01
1819	2	+65 56 38,97	15,607	+9,8751	+9,8519	,1933	,7976	183	+,041	+ ,13
1820	4	—28 37 10,70	15,621	+8,9085	—9,5718	,1937	,7970	169	+,013	— ,02
1821	3	—14 10 19,08	15,621	+9,4281	—9,2799	+1,1937	+9,7970	172	+,020	— ,04
1822	2	+22 40 23,88	15,642	+9,8069	+9,4785	,1943	,7960	178	—,004	— ,01
1823	1	— 7 5 43,80	15,642	+9,5490	—8,9833	,1943	,7960	175	+,027	— ,08
1824	2	— 6 8 21,10	15,650	+9,5611	—8,9201	,1945	,7957	176	+,012	— ,45
1825	2	— 0 30 1,57	15,672	+9,6325	—7,8193	,1951	,7948	182	—,001	,00
1826	3	—21 10 9,03	15,678	+9,2553	—9,4506	+1,1953	+9,7945	179	+,017	— ,01
1827	2	— 9 48 44,22	15,693	+9,5079	—9,1240	,1957	,7938	186	+,012	— ,21
1828	2	—19 58 16,30	15,708	+9,2945	—9,4268	,1961	,7932	187	+,006	— ,15
1829	1	+41 34 33,16	15,708	+6,8669	+9,7163	,1961	,7932	191	+,007	+ ,01
1830	2	—19 7 14,38	15,762	+9,3181	—9,4101	,1976	,7908	193	+,011	— ,04
1831	1	+58 50 51,64	15,783	+9,8756	+9,8287	+1,1982	+9,7898	205		— ,01
1832	2	+23 43 26,73	15,805	+9,8096	+9,5019	,1988	,7889	200	+,009	— ,01
1833	3	—19 10 1,86	15,816	+9,3201	—9,4127	,1991	,7884	199	—,001	— ,08
1834	3	+30 16 43,01	15,837	+9,8351	+9,6006	,2000	,7874	210	+,023	— ,14
1835	3	—26 10 39,44	15,843	+9,0755	—9,5421	,1999	,7871	204	+,026	+ ,02
1836	2	—16 59 5,61	15,848	+9,3729	—9,3627	+1,2000	+9,7869	206	+,014	— ,05
1837	2	—28 37 33,53	15,859	+8,9445	—9,5784	,2003	,7864	207	+,017	+ ,03
1838	3	+ 5 53 43,78	15,888	+9,6946	+8,9123	,2010	,7851	216	+,019	— ,10
1839		+61 4	15,883	+9,8716	+9,8411	,2009	,7853	221		
1840	3	—14 47 40,66	15,930	+9,4216	—9,3066	,2022	,7831	218	+,015	— ,16
1841	3	+65 0 30,52	15,933	+9,8663	+9,8597	+1,2023	+9,7830	229	+,017	— ,16
1842	3	+38 34 54,09	15,972	+9,8603	+9,6964	,2033	,7813	228	+,017	— ,12
1843	3	+ 1 24 8,68	15,990	+9,6522	+8,2950	,2038	,7803	227	+,011	— ,03
1844	1	+64 51 13,34	15,987	+9,8663	+9,8586	,2037	,7805	236	+,044	— ,13
1845	3	—22 40 5,17	16,032	+9,2279	—9,4886	,2050	,7783	230	—,010	+ ,02

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan 1, 1836.	Annual Preces-sion.	Logarithms of a	b	c	d
				h. m. s.	s				
1846	Capricorni	8	1	21 32 17,06	+3,398	+8,7609	—8,6362	+0,5312	—8,3416
1847	———	8	3	32 29,28	3,291	,7434	,6179	,5173	—8,1717
1848	Aquarii	8	3	32 45,03	3,067	,7276	,6010	,4867	+6,7476
1849	———	8.9	2	33 31,97	3,073	,7287	,5990	,4876	—6,5349
1850	Capricorni	9	3	33 45,14	3,196	,7347	,6039	,5046	—7,9377
1851	Cygni	6.7	2	35 6,44	2,520	+8,8163	—8,6805	+0,4014	+8,5726
1852	Cephei	7.8	2	35 16,32	1,861	,9932	,8568	,2697	+8,9160
1853	Aquarii	7.8	2	35 49,03	3,143	,7338	,5951	,4973	—7,7115
1854	Cygni	8	2	35 57,61	2,402	,8497	,7107	,3806	+8,6606
1855	Pegasi	7	3	36 26,17	2,751	,7658	,6246	,4395	+8,3409
1856	Cygni	8	2	37 3,09	2,653	+8,7878	—8,6442	+0,4237	+8,4601
1857	Cephei	7.8	2	37 16,80	1,869	,9977	,8533	,2716	+8,9213
1858	Pegasi *seq.*	8		37	2,751	,7677	,6218	,4395	+8,3447
1859	Aquarii	8	3	37 49,34	3,134	,7362	,5894	,4961	—7,6648
1860	Pegasi	7	2	38 31,01	2,710	,7778	,6281	,4330	+8,4013
1861	Capricorni	8	2	38 52,67	3,301	+8,7551	—8,6038	+0,5186	—8,2165
1862	Pegasi	7	2	38 56,12	2,712	8,7782	8,6269	,4333	+8,4011
1863	Cephei	8	1	39 44,91	1,138	9,1694	9,0154	,0561	+9,1375
1864	Capricorni	9	3	39 50,80	3,402	8,7752	8,6210	,5317	—8,3770
1865	Aquarii	8.9	3	39 58,49	3,069	8,7376	8,5820	,4870	—6,7064
1866	Pegasi	7	2	40 13,92	2,927	+8,7450	—8,5887	+0,4664	+8,0029
1867	———	78.	2	41 17,05	2,593	8,8110	,6503	,4138	+8,5358
1868	Capricorni	7.8	3	41 24,25	3,299	8,7587	,5972	,5184	—8,2230
1869	———	8	2	42 4,28	3,405	8,7796	,6156	,5321	—8,3892
1870	Cephei	8.9	2	43 10,31	1,907	9,0069	,8386	,2803	+8,9310
1871	Cephei	8	2	43 11,42	1,903	+9,0081	—8,8398	+0,2794	+8,9327
1872	Capricorni	8	3	43 40 26	3,308	8,7636	,5932	,5196	—8,2493
1873	Cygni	8	2	43 41,97	2,367	8,8792	,7090	,3742	+8,7142
1874	Pegasi	7	3	43 52,30	2,810	8,7671	,5958	,4487	+8,2816
1875	———	8.9	3	44 8,50	2,884	8,7558	,5834	,4600	+8,1354
1876	Cephei	7.8	3	44 31,09	1,751	+9,0514	—8,8779	+0,2433	+8,9912
1877	Capricorni	8	2	44 38,41	3,350	8,7728	,5982	,5250	—8,3225
1878	Cephei	8	3	46 10,84	1,747	9,0580	,8776	,2423	+8,9992
1879	Pegasi	7.8	1	46 22,64	2,546	8,8344	,6529	,4059	+8,5971
1880	Aquarii	7.8	3	47 18,47	3,047	8,7471	,5615	,4839	+7,1975
1881	Gruis	8	3	47 23,78	3,649	+8,8536	—8,6677	+0,5622	—8,6479
1882	Cephei	7	2	47 25,09	1,824	9,0425	,8570	,2610	+8,9782
1883	Capricorni	7.8	2	47 59,97	3,332	8,7746	,5863	,5227	—8,3076
1884	Pegasi	7.8	2	48 21,32	2,553	8,8369	,6472	,4070	+8,5998
1885	Cephei	8		48	2,092	8,9702	,7839	,2206	+8,8740
1886	Pegasi	7.8	2	48 44,15	2,798	+8,7770	—8,5856	+0,4468	+8,3210
1887	———	7.8	2	48 55,62	2,799	,7770	,5848	,4470	+8,3193
1888	Cephei	7.8	2	49 21,60	1,655	9,0920	,8984	,2188	+9,0418
1889	———	7	3	49 22,77	2,006	9,0001	,8063	,3023	+8,9179
1890	Aquarii	8	3	51 1,98	3,156	8,7547	,5538	,4991	—7,8426

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s.	″
1846	3	−22 24 9,74	+16,032	+9,2380	−9,4837	+1,2050	+9,7783	231	+,036	− ,03
1847	4	−15 35 2,16	16,042	+9,4099	−9,3323	,2053	,7778	232	+,008	− ,11
1848	3	+ 0 33 54,08	16,057	+9,6434	+7,9115	,2056	,7771	237	+,010	− ,20
1849	4	− 0 23 50,82	16,097	+9,6335	−7,7109	,2068	,7751	239	+,014	− ,20
1850	2	− 9 12 28,89	16,112	+9,5224	−9,1082	,2071	,7744	240	−,002	− ,02
1851	4	+34 45 50,74	16,177	+9,8407	+9,6632	+1,2089	+9,7711	253	+,017	− ,14
1852	2	+56 50 22,33	16,184	+9,8639	+9,8300	,2091	,7708	256	+,002	+ ,01
1853	3	− 5 28 45,14	16,216	+9,5752	−8,8856	,2099	,7692	254	+,007	+ ,03
1854	3	+40 18 2,24	16,219	+9,8519	+9,7190	,2100	,7690	261	+,008	− ,05
1855	3	+22 4 11,30	16,246	+9,7938	+9,4834	,2107	,7676	262	+,006	+ ,02
1856	3	+28 2 3,77	16,277	+9,8176	+9,5819	+1,2116	+9,7661	267	+,010	− ,12
1857	4	+56 59 19,88	16,287	+9,8603	+9,8335	,2118	,7655	277	+,043	+ ,01
1858	1	+22 10 1,70	16,308	+9,7924	+9,4874	,2124	,7644	274		− ,20
1859	4	− 4 52 48,75	16,318	+9,5832	−8,8393	,2127	,7639	272	+,023	− ,17
1860	5	+24 49 47,46	16,354	+9,8041	+9,5352	,2136	,7620	279	+,013	− ,10
1861	4	−16 49 57,22	16,375	+9,3944	−9,3736	+1,2142	+9,7609	280	−,013	− ,16
1862	1	+24 48 22,82	16,375	+9,8035	+9,5352	,2142	,7609	284	+,018	− ,10
1863	3	+68 18 11,33	16,408	+9,8414	+9,8812	,2151	,7591	293	+,007	− ,10
1864	3	−23 34 34,51	16,422	+9,2279	−9,5153	,2154	,7584	286	+,013	+ ,03
1865	3	− 0 33 19,15	16,428	+9,6325	−7,8825	,2156	,7580	287	+,013	− ,12
1866	3	+10 25 4,87	16,438	+9,7251	+9,1718	+1,2159	+9,7575	289	+,020	− ,16
1867	2	+32 2 17,33	16,492	+9,8261	+9,6401	,2173	,7546	299	+,012	+ ,09
1868	4	−16 57 5,50	16,502	+9,3979	−9,3798	,2175	,7540	296	+,007	− ,22
1869	4	−24 1 45,40	16,532	+9,2201	−9,5259	,2183	,7524	301	+,019	− ,06
1870	3	+57 5 36,46	16,584	+9,8500	+9,8419	,2197	,7494	309	+,004	+ ,03
1871	4	+57 11 59,62	16,584	+9,8494	+9,8424	+1,2197	+9,7494	310	+,002	+ ,03
1872	4	−17 49 54,06	16,610	+9,3838	−9,4041	,2204	,7479	307	+,021	+ ,02
1873	4	+43 7 36,16	16,607	+9,8451	+9,7533	,2203	,7481	313	+,022	− ,04
1874	3	+19 3 38,54	16,620	+9,7730	+9,4331	,2206	,7474	312	+,012	− ,01
1875	4	+13 50 14,59	16,633	+9,7443	+9,2986	,2210	,7466	316	+,012	− ,05
1876	3	+60 30 34,89	16,647	+9,8432	+9,8592	+1,2213	+9,7459	318	+,028	− ,08
1877	4	−20 46 55,83	16,659	+9,3201	−9,4694	,2216	,7451	317	+,012	+ ,03
1878	3	+60 50 57,10	16,727	+9,8401	+9,8627	,2234	,7411	328	+,017	+ ,04
1879	4	+35 21 24,93	16,739	+9,8274	+9,6845	,2237	,7404	325	+,015	− ,15
1880	3	+ 1 35 18,29	16,788	+9,6522	+8,3735	,2250	,7375	330	+,008	− ,03
1881	3	−38 31 56,97	16,791	−7,0000	−9,7174	+1,2251	+9,7373	329	+,029	− ,11
1882	3	+59 33 17,04	16,788	+9,8395	+9,8587	,2250	,7375	334	+,023	− ,02
1883	4	−19 58 0,06	16,819	+9,3463	−9,4568	,2258	,7355	333	+,007	− ,13
1884	4	+35 22 19,11	16,836	+9,8248	+9,6871	,2262	,7345	337	+,004	− ,15
1885	2	+53 13 35,86	16,798	+9,8432	+9,8270	,2252	,7369	335		− ,02
1886	3	+20 27 48,83	16,854	+9,7745	+9,4687	+1,2267	+9,7334	339	+,009	− ,06
1887	3	+20 22 58,62	16,864	+9,7745	+9,4673	,2269	,7328	342	+,004	− ,10
1888	3	+62 57 45,90	16,879	+9,8306	+9,8752	,2273	,7318	349	+,037	− ,03
1889	2	+55 50 11,38	16,882	+9,8388	+9,8433	,2274	,7316	347	+,010	− ,05
1890	3	− 7 3 18,41	16,960	+9,5635	−9,0154	,2294	,7266	350	+,014	− ,04

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a	b	c	d
				h. m. s.	s.				
1891	Aquarii	8	3	21 51 19,10	+3,301	+8,7739	—8,5717	+0,5186	—8,2674
1892	———	8	3	51 36,63	3,066	,7521	,5487	,4866	+6,2158
1893	———	8	2	51 55,66	3,409	,7980	,5932	,5326	—8,4362
1894	———	7.8	1	52 19,33	3,301	,7755	,5690	,5186	—8,2720
1895	Pegasi	8	2	52 38,73	2,724	,7997	,5921	,4352	+8,4418
1896	Aquarii	8	1	53 18,11	3,091	+8,7543	—8,5439	+0,4901	—7,2748
1897	Cygni	7.8	1	53 25,84	2,281	8,9317	,7207	,3581	+8,8051
1898	Pegasi	8	2	53 42,87	2,726	8,8011	,5890	,4355	+8,4440
1899	Aquarii	8	3	53 47,54	3,436	8,8079	,5955	,5360	—8,4770
1900	Cephei	7.8	2	53 53,98	1,997	9,0174	,8047	,3004	+8,9405
1901	Pegasi	7	2	53 58,17	2,943	+8,7617	—8,5485	+0,4688	+8,0099
1902	Aquarii	8	3	54 6,59	3,088	,7552	,5414	,4897	—7,2231
1903	———	7.8	3	55 1,70	3,355	,7906	,5728	,5257	—8,3744
1904	———	8.9	2	55 16,06	3,237	,7691	,5501	,5101	—8,1461
1905	Piscis Aust.	8	4	56 48,43	3,459	,8200	,5939	,5389	—8,5168
1906	Pegasi	8	2	57 28,22	3,006	+8,7606	—8,5322	+0,4780	+7,7165
1907	———	7	2	57 38,16	3,004	,7609	,5319	,4777	+7,7291
1908	Aquarii	7.8	3	58 6,39	3,355	,7956	,5643	,5257	—8,3878
1909	Pegasi	7.8	1	58 18,31	3,016	,7610	,5292	,4794	+7,6476
1910	Piscis Aust.	7	1	59 8,50	3,519	,8416	,6060	,5464	—8,5881
1911	Lacertæ	7	2	59 12,76	2,412	+8,9062	—8,6706	+0,3824	+8,7506
1912	Aquarii	7	1	59 29,41	3,403	,8095	,5724	,5319	—8,4597
1913	———	8	3	59 38,77	3,152	,7646	,5269	,4986	—7,8597
1914	Pegasi	8		59 49	2,621	,8415	,6032	,4185	+8,5863
1915	———	7.8	2	22 0 3,86	2,768	,8017	,5623	,4422	+8,4150
1916	Aquarii	8	3	0 16,53	3,073	+8,7620	—8,5213	+0,4876	—6,6407
1917	———	7	2	0 49,47	3,046	8,7628	,5196	,4837	+7,2947
1918	Cephei	7	1	1 38,66	2,011	9,0397	,7935	,3034	+8,9684
1919	Lacertæ	8	3	2 58,35	2,472	8,8965	,6441	,3930	+8,7253
1920	Cephei	7.8	2	3 5,50	2,004	9,0468	,7941	,3019	+8,9776
1921	Aquarii	8	1	3 21,49	2,242	+8,7803	—8,5262	+0,5108	—8,1938
1922	Gruis	7	3	4 36,11	3,650	8,8964	,6366	,5623	—8,7230
1923	Cephei	7	2	4 50,36	1,787	9,1149	,8545	,2521	+9,0661
1924	Pegasi	6.7	3	5 33,06	2,640	8,8480	,5840	,4216	+8,5935
1925	———	7.8	1	5 50,75	2,971	8,7729	,5074	,4729	+7,9526
1926	Aquarii	8	3	5 57,46	3,389	+8,8172	—8,5510	+0,5301	—8,4705
1927	———	7	2	6 37,93	3,138	8,7713	,5025	,4966	—7,8162
1928	Pegasi	7.8	3	7 7,85	2,793	8,8069	,5356	,4461	+8,4082
1929	Cephei	7.8	2	7 16,85	1,857	9,1048	,8332	,2688	+9,0528
1930	Aquarii	9	3	7 21,22	3,273	8,7912	,5190	,5149	—8,2811
1931	Cephei	6.7	2	8 40,68	1,878	+9,1043	—8,8263	+0,2737	+9,0517
1932	Pegasi	7.8	3	9 9,15	2,733	8,8268	,5463	,4366	+8,5038
1933	Lacertæ	8	3	9 14,80	2,463	8,9165	,6358	,3915	+8,7606
1934	Pegasi	7.8	2	10 2,98	2,924	8,7836	,4989	,4660	+8,1406
1935	Aquarii	8	3	10 47,51	3,168	8,7786	,4904	,5008	—7,9870

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s.	″
1891	3	−18 10 3,88	+16,977	+9,3909	−9,4213	+1,2298	+9,7256	352	+,029	− ,01
1892	3	+ 0 8 26,99	16,988	+9,6395	+7,3919	,2301	,7248	353	+,016	− ,08
1893	3	−25 47 33,26	17,004	+9,2068	−9,5668	,2305	,7238	354	+,014	− ,12
1894	2	−18 17 56,69	17,023	+9,3909	−9,4256	,2310	,7226	356	+,019	+ ,04
1895	4	+26 0 1,91	17,035	+9,7931	+9,5715	,2313	,7218	359	+,017	+ ,02
1896	4	− 1 54 48,53	17,065	+9,6191	−8,4507	+1,2321	+9,7197	364	+,030	+ ,06
1897	3	+48 20 22,68	17.072	+9,8319	+9,8037	,2323	,7193	368	+,010	− ,04
1898	2	+26 2 42,56	17,083	+9,7924	+9,5735	,2326	,7185	369	+,006	− ,05
1899	3	−27 50 16,89	17,088	+9,1461	−9,5997	,2327	,7183	367	+,009	− ,06
1900	3	+56 52 31,96	17,090	+9,8293	+9,8539	,2327	,7181	373	+,026	+ ,07
1901	3	+10 11 8,85	17,094	+9,7160	+9,1791	+1,2329	+9,7177	370	+,005	− ,16
1902	3	− 1 42 21,08	17,102	+9,6222	−8,3990	,2330	,7173	371	+,012	+ .03
1903	3	−22 34 12,21	17,144	+9,3053	−9,5159	,2341	,7143	377	+,016	+ ,02
1904	3	−13 48 29,44	17,156	+9,4742	−9,3095	,2344	,7135	379	+,003	,00
1905	4	−29 51 55,35	17,231	+9,0864	−9,6311	,2363	,7082	384	+,003	− ,10
1906	4	+ 5 10 15,74	17,255	+9,6794	+8,8908	+1,2369	+9,7065	390	+,012	− ,13
1907	4	+ 5 18 52,62	17,261	+9,6803	+8,9033	,2371	,7061	391	+,013	− ,19
1908	3	−23 2 11,24	17,284	+9,3032	−9,5279	,2377	,7044	393	−,001	+ ,12
1909	3	+ 4 23 53,64	17,291	+9,6739	+8,8224	,2378	,7040	395	+,006	− ,12
1910	3	−33 55 29,76	17,329	+8,9031	−9,6832	,2388	,7011	398	+,031	+ ,04
1911	3	+44 18 58,77	17,329	+9,8202	+9,7812	+1,2388	+9,7011	404	+0,18	− ,03
1912	3	−26 34 0,41	17,343	+9,2148	−9,5874	,2391	,7001	400	−0,18	+ ,07
1913	3	− 7 10 54,25	17,349	+9,5670	−9,0324	,2393	,6996	403	+0,15	− ,05
1914	3	+33 43 15,23	17,355	+9,8055	+9,6822	,2394	,6992	409		+ ,06
1915	3	+24 13 6,47	17,367	+9,7789	+9,5510	,2397	,6983	411	+,008	+ ,03
1916	4	− 0 27 42,54	17,378	+9,6335	−7,8167	+1,2400	+9,6974	412	−,001	− ,19
1917	3	+ 1 56 5,73	17,404	+9,6532	+8,4705	,2407	,6954	417	+,010	− ,05
1918	2	+58 2 31,35	17,434	+9,8122	+9,8681	,2414	,6932	4	+,015	− ,06
1919	4	+42 23 4,69	17,494	+9,8122	+9,7697	,2429	,6885	8	+,004	+ ,07
1920	2	+58 29 17,02	17,496	+9,8082	+9,8717	,2429	,6883	12	+,021	+ ,11
1921	4	−15 1 57,76	17,510	+9,4669	−9,3548	+1,2433	+9,6872	7	+,016	− ,16
1922	3	−42 9 18,03	17,564	−7,0000	−9,7693	,2446	,6828	18	+,074	− ,61
1923	3	+63 19 2,44	17,570	+9,7959	+9,8940	,2448	,6824	24	+,018	− ,02
1624	3	+33 47 53,38	17,602	+9,7966	+9,6891	,2455	,6796	29	+,018	− ,10
1925	3	+ 8 40 8,93	17,617	+9,6998	+9,1237	,2459	,6784	30	+,011	− ,05
1926	4	−26 46 41,63	17,623	+9,2380	−9,5974	+1,2461	+9,6780	25	+,008	+ ,01
1927	4	− 6 23 47,28	17,648	+9,5786	−8,9896	,2467	,6759	35	+,016	− ,06
1928	3	+23 30 10,52	17,670	+9,7679	+9,5465	,2472	,6740	39	+,010	+ ,05
1929	2	+62 28 57,17	17,672	+9,7910	+9,8933	,2473	,6737	42	−,005	+ ,03
1930	3	−18 1 3,85	17,678	+9,4265	−9,4354	,2474	,6733	38	+,017	+ ,08
1931	3	+62 21 2,46	17,731	+9,7882	+9,8941	+1,2487	+9,6687	53	+,017	+ ,07
1932	3	+28 21 26,18	17,752	+9,7803	+9,6243	,2492	,6668	52	+,014	+ ,01
1933	4	+44 16 26,93	17,754	+9,1028	+9,7914	,2493	,6666	55	+,009	− ,04
1934	2	+13 8 1,90	17,789	+9,7220	+9,3052	,2402	,6634	57	+,013	− ,07
1935	4	− 9 19 25,97	17,819	+9,5490	−9,1574	,2509	,6607	59	+,005	− ,09

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.	Annual Precession.	Logarithms of a	b	c	d
				h. m. s.	s.				
1936	Pegasi	7	3	22 10 56,84	+2,856	+8,7977	—8,5089	+0,4558	+8,3140
1937	———	7		11	2,925	,7851	,4942	,4661	+8,1459
1938	Lacertæ	7	2	11 45,32	2,611	,8711	,5789	,4168	+8,6502
1939	Pegasi	7	2	12 41,37	2,926	,7863	,4894	,4663	+8,1460
1940	Aquarii	7	2	12 48,76	3,142	,7780	,4805	,4972	—7,8660
1941	Pegasi	7	2	13 9,95	2,986	+8,7792	—8,4798	+0,4751	+7,9127
1942	———	8	2	15 17,15	3,009	8,7793	,4700	,4784	+7,7788
1943	Aquarii	7.8	2	15 27,09	3,182	8,7853	,4751	,5027	—8,0659
1944	Lacertæ	7.8	3	15 34,92	2,644	8,8685	,5580	,4223	+8,6362
1945	Cephei	7.8	3	19 16,69	1,964	9,1200	,7913	,2931	+9,0689
1946	Pegasi	7.8	3	19 25,66	3,032	+8,7817	—8,4524	+0,4817	+7,5915
1947	———	8	2	20 16,24	2,730	8,8486	,5150	,4360	+8,5607
1948	Cephei	7	2	20 18,21	1,987	9,1174	,7838	,2982	+9,0654
1949	Aquarii	8	3	20 24,93	3,172	8,7892	,4545	,5013	—8,0518
1950	———	8.9	2	20 39,06	3,172	8,7893	,4536	,5013	—8,0492
1951	Piscis Aust.	9	3	21 45,66	3,326	+8,8256	—8,4843	+0,5219	—8,4513
1952	—— ——	8.9	2	22 11,38	3,429	,8605	,5172	,5352	—8,5986
1953	Aquarii	8.9	4	22 11,53	3,180	,7920	,4487	,5024	—8,0898
1954	Pegasi	7.8	2	22 22,69	3,034	,7843	,4399	,4820	+7,5720
1955	Aquarii	8	3	22 24,66	3,179	,7922	,4475	,5023	—8,0894
1956	Aquarii	8	4	23 24,22	3,208	+8,7982	—8,4488	+0,5062	—8,1943
1957	———	8	3	24 12,34	3,247	,8076	,4541	,5115	—8,3049
1958	———	7	4	26 34,65	3,312	,8290	,4632	,5201	—8,4520
1959	———	9	2	26 58,14	3,278	,8194	,4515	,5156	—8,3886
1960	Picis Aust.	7.8	3	27 24,49	3,402	,8614	,4914	,5317	—8,5912
1961	Aquarii	7.8	3	27 51,10	3,278	+8,8206	—8,4481	+0,5156	—8,3926
1962	Lacertæ	8	3	28 10,48	2,651	,8962	,5223	,4234	+8,6927
1963	——— *pre.*	7		28	2,652	,8968	,5208	,4236	+8,6938
1964	Piscis Aust.	8.9	4	28 59,47	3,346	,8440	,4659	,5245	—8,5197
1965	Aquarii	8	3	30 46,11	3,107	,7916	,4035	,4923	—7,6814
1966	Aquarii	8	2	32 18,93	3,106	+8,7927	—8,3962	+0,4922	—7,6760
1967	Piscis Aust.	8	3	32 21,90	3,333	8,8459	,4491	,5228	—8,5187
1968	Pegasi	8	2	32 45,36	2,947	8,8044	,4056	,4694	+8,1793
1969	Aquarii	8	3	33 21,81	3,163	8,8002	,3982	,5001	—8,0789
1970	Cephei	8	2	33 22,35	2,322	9,0511	,6491	,3659	+8,9726
1971	Aquarii	9	3	33 37,33	3,105	+8,7937	—8,3898	+0,4921	—7,6686
1972	———	9	3	34 51,40	3,147	,7991	,3885	,4979	—8,0052
1973	———	9	4	36 1,54	3,139	,7989	,3820	,4968	—7,9661
1974	———	9	4	36 31,85	3,138	,7993	,3793	,4966	—7,9639
1975	———	8.9	4	37 42,91	3,155	,8028	,3759	,4990	—8,0641
1976	Pegasi	8	3	37 56,24	2,802	+8,8565	—8,4284	+0,4475	+8,5506
1977	Lacertæ	8	3	39 11,54	2,601	,9500	,5150	,4151	+8,8025
1978	Aquarii	7.8	2	39 24,48	3,109	,7983	,3617	,4926	—7,7443
1979	———	9	4	39 30,49	3,240	,8252	,3879	,5105	—8,3702
1980	Piscis Aust.	8	3	40 50,12	3,368	,8772	,4319	,5274	—8,6206

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	Logarithms of b′	Logarithms of c′	Logarithms of d′	Piazzi No.	Annual P. M. A. R.	Annual P. M. Decn.
		° ′ ″	″						s	″
1936	3	+19 8 45,05	+17,824	+9,7482	+9,4653	+1,2510	+9,6602	60	+,016	— ,08
1937	2	+13 15 0,34	17,843	+9,7218	+9,3102	,2515	,6585	62		— ,11
1938	3	+36 56 52,96	17,853	+9,7924	+9,7289	,2517	,6575	65	+,004	+ ,06
1939	4	+13 12 42,36	17,893	+9,7202	+9,3104	,2527	,6538	69	+,008	— ,01
1940	4	— 7 3 55,81	17,898	+9,5752	—9,0388	,2528	,6533	68	+,005	— ,01
1941	4	+ 7 47 58,66	17,913	+9,6911	+9,0848	+1,2532	+9,6518	73	+,010	— ,15
1942	4	+ 5 42 53,06	17,995	+9,6776	+8,9527	,2551	,6439	82	+,015	— ,01
1943	4	—11 1 25,15	18,002	+9,5340	—9,2339	,2553	,6431	83	+,004	— ,10
1944	4	+35 49 48,51	18,005	+9,7846	+9,7211	,2554	,6429	87	+,018	,00
1945	4	+62 44 20,63	18,146	+9,7612	+9,9057	,2588	,6281	109	+,015	+ ,03
1946	4	+ 3 41 22,47	18,150	+9,6628	+8,7667	+1,2589	+9,6276	106	+,011	— ,02
1947	2	+31 0 16,66	18,183	+9,7701	+9,6697	,2597	,6240	113	+,014	— ,04
1948	3	+62 29 44,43	18,182	+9,7581	+9,9055	,2597	,6240	115	+,002	+ ,05
1949	2	—10 34 20,81	18,190	+9,5428	—9,2205	,2598	,6232	110	+,014	— ,15
1950	3	—10 29 56,06	18,197	+9,5453	—9,2180	,2600	,6224	114	+,015	— ,08
1951	3	—25 0 22,75	18,239	+9,3385	—9,5847	+1,2610	+9,6177	119	+,010	— ,07
1952	2	—33 11 30,57	18,253	+9,1367	—9,6974	,2613	,6161	124	+,039	+ ,02
1953	4	—11 27 48,14	18,253	+9,5353	—9,2572	,2613	,6161	125	+,012	— ,01
1954	4	+ 3 29 42,77	18,260	+9,6609	+8,7473	,2615	,6152	127	+,007	— ,08
1955	3	—11 26 37,57	18,262	+9,5353	—9,2567	,2616	,6149	126	+,003	— ,03
1956	5	—14 26 5,83	18,297	+9,5024	—9,3565	+1,2624	+9,6110	133	+,007	— ,01
1957	3	—18 20 26,43	18,325	+9,4548	—9,4584	,2630	,6076	138	+,003	+ ,03
1958	3	—24 50 12,50	18,409	+9,3579	—9,5860	,2650	,5972	146	+,007	— ,11
1959	4	—21 46 47,23	18,423	+9,4099	—9,5325	,2653	,5954	148	+,015	— ,04
1960	2	—32 29 16,05	18,436	+9,1931	—9,6935	,2657	,5937	154	—,002	+ ,01
1961	4	—21 56 14,58	18,452	+9,4082	—9,5361	+1,2660	+9,5916	155	+,014	+ ,03
1962	2	+38 44 19,23	18,461	+9,7649	+9,7608	,2663	,5904	159	+,041	— ,12
1963	1	+38 46 51,87	18,475	+9,7642	+9,7616	,2666	,5886	163		— ,26
1964	4	—28 17 33,19	18,488	+9,2988	—9,6405	,2669	,5868	162	+,056	— ,01
1965	3	— 4 27 27,57	18,551	+9,6064	—8,8562	,2684	,5782	171	+,014	— ,09
1966	5	— 4 24 20,84	18,601	+9,6064	—8,8508	+1,2695	+9,5711	183	+,008	— ,12
1967	4	—28 6 33,99	18,603	+9,3181	—9,6404	,2696	,5707	182	+,002	+ ,03
1968	1	+13 41 21,39	18,614	+9,7067	+9,3428	,2698	,5692	186	+,032	— ,02
1969	2	—10 58 50,30	18,634	+9,5514	—9,2470	,2703	,5663	188	+,012	— ,07
1970	3	+56 32 9,01	18,634	+9,7372	+9,8900	,2703	,5663	194	+,043	+ ,14
1971	3	— 4 19 40,33	18,644	+9,6085	—8,8435	+1,2705	+9,5647	191	+,017	— ,27
1972	4	— 9 16 26,40	18,683	+9,5682	—9,1756	,2714	,5589	204	+,008	+ ,01
1973	4	— 8 28 30,16	18,718	+9,5763	—9,1375	,2723	,5533	206	+,008	— ,03
1974	4	— 8 25 28,09	18,735	+9,5763	—9,1353	,2726	,5507	208	+,018	+ ,04
1975	3	—10 33 22,24	18,772	+9,5587	—9,2328	,2735	,5447	213	+,010	— ,23
1976	4	+29 35 49,40	18,777	+9,7405	+9,6658	+1,2736	+9,5436	214	—,011	— ,45
1977	3	+45 21 12,67	18,814	+9,7404	+9,8250	,2745	,5375	222	+,021	— ,11
1978	2	— 5 5 35,50	18,821	+9,6042	—8,9187	,2747	,5361	220	+,018	— ,24
1979	4	—20 33 33,30	18,826	+9,4564	—9,5178	,2748	,5354	221	+,002	— ,18
1980	3	—33 40 8,50	15,867	+9,2405	—9,7171	,2757	,5285	224	+,019	+ ,07

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan. 1, 1836.			Annual Precession.	Logarithms of a	b	c	d
				h.	m.	s.	s.				
1981	Aquarii	8.9	3	22	41	40,78	+3,133	+8,8027	—8,3527	+0,4960	—7,9622
1982	Pegasi	8	4		44	12,66	3,048	,8003	,3348	,4840	+7,4734
1983	Aquarii	8	5		45	14,73	3,109	,8025	,3304	,4926	—7,7841
1984	———	9	4		50	1,27	3,106	,8054	,3023	,4922	—7,7750
1985	Andromedæ	8	3		50	2,84	2,749	,9101	,4075	,4392	+8,7046
1986	Pegasi	7.8	1		50	26,81	3,093	+8,8065	—8,3012	+0,4804	+7,8592
1987	Cephei	8	4		50	52,83	—0,667	9,7798	9,2728	—9,8241	+9,7774
1988	Aquarii	8	2		51	22,16	+3,091	8,8049	8,2934	+0,4901	—7,5651
1989	———	7.8	1		51	31,33	3,268	8,8544	8,3415	0,6143	—8,5112
1990	Pegasi	7.8	4		51	31,41	3,023	8,8071	8,2943	0,4804	+7,8610
1991	Pegasi	8	5		51	49,82	3,023	+8,8073	—8,2927	+0,4804	+7,8634
1992	Andromedæ	8	1		52	6,26	2,580	9,0100	,4936	,4116	+8,9033
1993	Aquarii	8	2		52	33,33	3,237	8,8431	,3230	,5101	—8,4464
1994	Pegasi	8	4		54	27,80	2,965	8,8218	,2892	,4720	+8,2450
1995	———	8	4		58	9,52	2,955	8,8289	,2695	,4706	+8,3107
1996	Pegasi	8	4		58	23,99	2,946	+8,8326	—8,2711	+0,4692	+8,3463
1997	Aquarii	8.9	4		59	54,45	3,128	,8154	,2424	,4953	—8,0500
1998	Pegasi	8	4		59	58,86	2,878	,8663	,2934	,4591	+8,5494
1999	———	8.9	3	23	2	24,63	3,016	,8154	,2234	,4794	+8,0057
2000	Piscium	7.8	2		2	54,11	3,045	,8115	,2152	,4836	+7,6693
2001	Aquarii	8.9	3		3	55,63	3,062	+8,8110	—8,2067	+0,4860	+7,1135
2002	———	7.8	4		4	25,70	3,127	,8183	,2102	,4951	—8,0762
2003	Piscium	8.9	3		5	11,24	3,033	,8141	,1999	,4819	+7,8544
2004	———	7.8	3		5	18,49	3,061	,8116	,1959	,4859	+7,1838
2005	Aquarii	8	2		5	42,62	3,243	,8713	,2522	,5109	—8,5614
2006	Pegasi	7.8	3		5	51,69	2,962	+8,8355	—8,2153	+0,4716	+8,3430
2007	Piscium	8	4		7	15,03	3,066	,8124	,1804	,4866	+6,6911
2008	Aquarii	8	2		7	50.76	3,238	,8732	,2360	,5103	—8,5662
2009	Pegasi	8	3		8	58,37	2,974	,8330	,1952	,4733	+8,3083
2010	———	8	3		10	13,41	2,924	,8627	,2048	,4660	+8,5155
2011	Pegasi	7.8	4		10	27,47	2,924	+8,8629	—8,2026	+0,4660	+8,5159
2012	Aquarii	9	3		10	28,73	3,141	,8275	,1672	,4971	—8,2207
2013	Piscium	8	2		10	29,61	3,046	,8151	,1549	,4837	+7,7146
2014	Pegasi	7	2		11	35,41	2,950	,8500	,1794	,4698	+8.4410
2015	Andromedæ	7.8	3		12	13,66	2,830	,9359	,2597	,4518	+8,7518
2016	Pegasi	7.8	3		13	55,09	2,940	+8,8605	—8,1677	+0,4683	+8,4982
2017	Aquarii	8.9	3		14	28,43	3,122	,8244	,1263	,4944	—8,1296
2018	Piscium	8	4		16	1,50	3,045	,8178	,1038	,4836	+7,7847
2019	Pegasi	9	3		16	38,25	2,964	,8508	,1313	,4719	+8,4355
2020	Aquarii	8	5		17	47,52	3,128	,8294	,0973	,4953	—8,2079
2021	Aquarii	8.9	4		17	53,06	3,166	+8,8497	—8,1162	+0,5005	—8,4245
2022	———	8.9	4		18	54,29	3,126	,8297	,0855	,4950	—8,2072
2023	Piscium	8.9	3		19	55,57	3,047	,8191	,0639	,4839	+7,7764
2024	———	8	3		21	11,88	3,048	,8195	,0501	,4840	+7,7796
2025	Gruis	8	4		21	41,68	3,273	,9528	,1780	,5149	—8,7855

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Precession.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s	″
1981	4	— 8 19 28,87	+18,890	+9,5809	—9,1337	+1,2762	+9,5242	228	+,012	+ ,13
1982	4	+ 2 41 0,03	18,962	+9,6513	+8,6490	,2779	,5104	237	+,018	— ,13
1983	4	— 5 31 40,98	18,993	+9,6042	—8,9582	,2786	,5045	242	+,029	— ,04
1984	3	— 5 22 43,20	19,922	+9,6064	—8,9492	,2815	,4765	259	+,014	— ,09
1985	4	+38 30 48,24	19,121	+9,7210	+9,7740	,2815	,4769	260	—,006	+ ,02
1986	2	+ 6 28 3,51	19,132	+9,6665	+9,0325	+1,2817	+9,4745	263	+,008	— ,08
1987	3	+83 54 21,26	19,138	+9,5331	+9,9775	,2819	,4729	280	,000	+ ,03
1988	3	— 3 19 1,64	19,155	+9,6191	—8,7405	,2823	,4688	269	+,010	— ,01
1989	1	—27 0 37,68	19,160	+9,4048	—9,6372	,2824	,4676	270	+,023	— ,17
1990	5	+ 6 28 51,47	19,160	+9,6674	+9,0343	,2824	,4676	271	+,012	— ,08
1991	3	+ 6 30 22,88	19,168	+9,6674	+9,0367	+1,2826	+9,4659	273	+,009	— ,01
1992	3	+51 25 35,35	19,174	+9,6972	+9,8740	,2827	,4643	276	+,006	+ ,09
1993	3	—23 40 3,80	19,188	+9,4487	—9,5844	,2830	,4609	277	+,029	+ ,03
1994	4	+15 21 3,11	19,233	+9,6928	+9,4053	,2840	,4495	283	+,013	— ,16
1995	4	+17 37 51,53	19,322	+9,6937	+9,4658	,2860	,4246	300	+,024	+ ,05
1996	4	+19 1 34,83	19,328	+9,6955	+9,4980	+1,2862	+9,4228	301	+,029	— ,02
1997	4	— 9 53 43,97	19,363	+9,5832	—9,2196	,2870	,4120	307	+,018	— ,20
1998	3	+28 48 24,85	19,363	+9,7024	+9,6681	,2870	,4120	309	+,008	+ ,17
1999	3	+ 8 53 34,80	19,418	+9,6693	+9,1765	,2882	,3942	3	+,019	+ ,01
2000	4	+ 4 6 53,92	19,430	+9,6532	+8,8443	,2885	,3902	5	+,005	— ,06
2001	3	+ 1 7 29,26	19,451	+9,6425	+8,2895	+1,2889	+9,3827	10	+,021	— ,04
2002	4	—10 27 39,54	19,461	+9,5843	—9,2451	,2892	,3791	15	+,012	— ,02
2003	4	+ 6 17 26,00	19,477	+9,6599	+9,0279	,2895	,3734	13	+,020	+ ,03
2004	4	+ 1 18 41,17	19,480	+9,6425	+8,3598	,2896	,3718	15	+,005	+ ,03
2005	4	—29 20 58,14	19,488	+9,4216	—9,6779	,2898	,3687	16	+,019	+ ,03
2006	4	+18 44 35,39	19,491	+9,6866	+9,4953	+1,2898	+9,3677	20	+,008	— ,01
2007	4	+ 0 24 59,18	19,519	+9,6385	+7,8672	,2905	,3564	21	+,014	— ,22
2008	4	—29 34 39,58	19,531	+9,4249	—9,6818	,2907	,3515	25	+,033	— ,19
2009	4	+17 22 0,53	19,533	+9,6821	+9,4641	,2907	,3510	27	+,019	— ,04
2010	4	+26 42 26,09	19,575	+9,6857	+9,6426	,2917	,3319	38	+,014	— ,03
2011	5	+26 42 42,69	19,581	+9,6858	+9,6429	+1,2918	+9,3296	44	,000	— ,01
2012	2	—14 20 47,42	19,581	+9,5647	—9,3830	,2918	,3296	41	+,045	— ,06
2013	2	+ 4 30 50,01	19,581	+9,6532	+8,8893	,2918	,3296	43	+,063	— ,26
2014	2	+22 55 51,44	19,601	+9,6830	+9,5813	,2923	,3197	48	+,015	— ,09
2015	3	+40 51 31,24	19,612	+9,6656	+9,8065	,2925	,3143	54	+,016	+ ,03
2016	4	+25 42 52,96	19,643	+9,6794	+9,6289	+1,2932	+9,2984	60	+,006	— ,06
2017	4	—11 40 26,48	19,653	+9,5866	—9,2967	,2934	,2934	64	+,031	+ ,21
2018	4	+ 5 17 8,41	19,679	+9,6532	+8,9589	,2940	,2780	72	+,013	— ,02
2019	3	+22 34 50,14	19,688	+9,6739	+9,5769	,2942	,2727	74	+,013	+ ,07
2020	4	—13 51 1,80	19,707	+9,5775	—9,3712	,2946	,2606	79	+,015	+ ,07
2021	4	—22 5 28,88	19,710	+9,5237	—9,5675	+1,2947	+9,2593	80	+,007	— ,09
2022	3	—13 49 45,35	19,725	+9,5786	—9,3706	,2950	,2489	85	+,008	+ ,03
2023	5	+ 5 10 20,83	19,741	+9,6513	+8,9507	,2954	,238	93	+,016	— ,19
2024	3	+ 5 11 58,52	19,760	+9,6513	+8,9539	,2958	,2253	98	+,025	— ,43
2025	4	—42 53 14,13	19,767	+9,3117	—9,8267	,2959	,2191	99	+,020	— ,02

Digitized by Google

No.	Star's name and Mag.		No. Obs.	Right Ascension Jan 1, 1836.	Annual Precession.	Logarithms of			
						a	*b*	*c*	*d*
				h. m. s.	*s.*				
2026	Andromedæ	8	5	23 23 55,97	+2,873	+8,9559	—8,1539	+0,4583	+8,7913
2027	Pegasi	8.9	4	24 25,78	2,947	,8837	8,0760	,4694	+8,5900
2028	Piscium	8.9	4	26 0,53	3,064	,8192	7,9911	,4863	+7,1090
2029	Aquarii	8	4	26 36,24	3,097	,8242	7,9882	,4909	—7,9973
2030	———	8.9	3	27 19,19	3,090	,8225	7,9766	,4900	—7,8851
2031	Ceti	8	3	28 4,17	3,159	+8,8665	—8,0106	+0,4995	—8,5101
2032	Piscium	8	4	29 26,10	3,060	,8205	7,9448	,4857	+7,4573
2033	Aquarii	7	4	29 31,31	3,118	,8372	7,9605	,4939	—8,2766
2034	Andromedæ	8	4	30 3,21	2,911	,9505	8,0660	,4640	+8,7777
2035	Piscium	8	5	31 56,04	3,057	,8217	7,9088	,4853	+7,6562
2036	Piscium	8	2	33 26,90	3,086	+8,8242	—7,8864	+0,4894	—7,9017
2037	Aquarii	8	4	34 20,24	3,100	,8311	,8787	,4914	—8,1561
2038	Piscium	8	2	35 54,68	3,068	,8215	,8407	,4869	—6,2853
2039	App. Sculp.	7.8	4	35 56,58	3,139	,8721	,8913	,4968	—8,5309
2040	Aquarii	8.9	2	36 15,39	3,091	,8274	,8417	,4901	—8,0374
2041	Andromedæ	8	3	36 35,71	2,931	+8,9750	—7,9818	+0,4670	+8,8272
2042	Aquarii	8.9	3	36 53,38	3,103	,8359	,8364	,4918	—8,2365
2043	———	8	4	37 31,77	3,101	,8356	,8231	,4915	—8,2293
2044	Piscium	8.9	3	37 36,53	3,069	,8219	,8094	,4870	—6,8538
2045	Aquarii	8	3	37 50,50	3,101	,8355	,8190	,4915	—8,2267
2046	Piscium	7.8	4	38 10,99	3,069	+8,8220	—7,7975	+0,4870	—6,6079
2047	Ceti	8.9	3	38 55,63	3,120	8,8586	7,8190	,4941	—8,4531
2048	Aquarii	8	5	40 56,59	3,113	8,8568	7,7733	,4932	—8,4397
2049	———	8.9	5	41 29,48	3,097	8,8380	7,7404	,4909	—8,2571
2050	Cephei	8	3	41 54,49	2,875	9,1414	8,0357	,4586	+9,0845
2051	Aquarii	8	2	41 59,69	3,096	+8,8387	—7,7297	+0,4908	—8,2646
2052	Pegasi *præ*	8.9	3	44 36,59	3,051	,8310	,6533	,4844	+8,1129
2053	——— *seq.*	8	3	44 37,85	3,051	,8311	,6514	,4844	+8,1130
2054	Andromedæ	7.8	3	44 41,89	3,004	,9154	,7338	,4777	+8,6853
2055	Piscium	8.9	3	44 49,07	3,062	,8242	,6407	,4860	+7,6957
2056	Pegasi	8	4	45 34,02	3,052	+8,8313	—7,6240	+0,4846	+8,1184
2057	Piscium	8	3	47 11,25	3,065	8,8237	,5643	,4864	+7,4859
2058	Sculptoris	8.9	5	48 3,60	3,108	8,8876	,5972	,4925	—8,5917
2059	Pegasi	7.8	2	48 20,75	3,041	8,8554	,5550	,4830	+8,4243
2060	Cassiopeæ	7.8	2	48 42,01	2,976	9,0643	,7510	,4736	+8,9774
2061	Pegasi	8	3	49 23,53	3,057	+8,8309	—7,4881	+0,4853	+8,0949
2062	Piscium	9	2	49 45,07	3,073	8,8251	,4680	,4876	—7,7536
2063	Pegasi	7.8	2	52 1,27	3,047	8,8701	,3947	,4839	+8,5125
2064	Andromedæ	7.8	5	56 19,45	3,054	8,9041	,0921	,4849	+8,6490
2065	Cassiopeæ	9	4	56 31,28	3,028	9,1802	,3429	,4812	+9,1334
2066	Ceti	8.9	3	57 6,65	3,071	+8,8312	—6,9077	+0,4873	—8,1809

Digitized by Google

No.	No. Obs.	Declination Jan. 1, 1836.	Annual Preces-sion.	Logarithms of a′	b′	c′	d′	Piazzi No.	Annual P. M. A. R.	Decn.
		° ′ ″	″						s.	″
2026	5	+43 10 4,80	+19,798	+9,6263	+9,8301	+1,2966	+9,1927	110	+,014	+ ,03
2027	4	+30 32 23,56	19,805	+9,6551	+9,7011	,2968	,1871	113	+,028	+ ,01
2028	4	+ 1 5 52,89	19,826	+9,6405	+8,2850	,2972	,1672	119	+,026	— ,06
2029	4	— 8 34 57,86	19,834	+9,6107	—9,1685	,2974	,1594	123	+,010	— ,13
2030	4	— 6 39 16,61	19,843	+9,6180	—9,0583	,2976	,1498	129	—,011	+ ,03
2031	4	—26 8 45,39	19,851	+9,5172	—9,6395	+1,2978	+9,1399	131	+,024	+ ,06
2032	4	+ 2 27 52,54	19,867	+9,6434	+8,6330	,2981	,1204	136	—,001	,00
2033	4	—15 59 51,61	19,869	+9,5809	—9,4357	,2982	,1195	137	—,002	— ,20
2034	4	+42 10 17,83	19,874	+9,6107	+9,8235	,2983	,1118	141	+,035	+ ,06
2035	4	+ 3 53 50,17	19,895	+9,6444	+8,8312	,2987	,0838	147	+,014	— ,06
2036	3	— 6 53 21,81	19,911	+9,6201	—9,0747	+1,2991	+9,0594	157	+,007	— ,10
2037	4	—12 14 12,15	19,920	+9,6031	—9,3223	,2993	,0449	161	+,005	— ,10
2038	4	— 0 11 49,39	19,935	+9,6375	—7,4614	,2996	,0168	168	+,005	— ,26
2039	4	—27 9 20,19	19,935	+9,5302	—9,6564	,2996	,0168	167	+,003	— ,04
2040	4	— 9 22 20,00	19,937	+9,6138	—9,2077	,2997	,0120	169	+,034	— ,11
2041	4	+45 21 16,31	19,940	+9,5763	+9,8500	+1,2997	+9,0046	172	+,015	— ,08
2042	3	—14 35 33,56	19,945	+9,5966	—9,3984	,2998	8,9983	174	+,013	— ,15
2043	3	—14 21 50,55	19,950	+9,5977	—9,3916	,2999	8,9855	178	+,007	+ ,01
2044	3	— 0 38 47,04	19,950	+9,6365	—8,0299	,2999	8,9855	179	+,006	— ,14
2045	2	—14 16 28,97	19,951	+9,5988	—9,3892	,3000	8,9816	180	+,004	— ,14
2046	4	— 0 22 47,61	19,954	+9,6375	—7,7840	+1,3000	+8,9736	183	—,009	— ,09
2047	3	—23 10 52,34	19,960	+9,5596	—9,5927	,3002	,9587	186	+,002	— ,03
2048	4	—22 31 30,02	19,976	+9,5682	—9,5814	,3005	,9150	194	+,008	+ ,04
2049	4	—15 14 52,89	19,980	+9,5999	—9,4177	,3006	,9010	199	+,018	— ,15
2050	4	+61 18 12,02	19,982	+9,4425	+9,9418	,3006	,8978	202	+,015	+ ,10
2051	4	—15 29 32,25	19,983	+9,5999	—9,4247	+1,3007	+8,8898	201	+,010	— ,10
2052	4	+11 0 55,09	19,999	+9,6415	+9,2809	,3010	,8213	216	+,005	+ ,11
2053	4	+11 0 51,10	20,000	+9,6415	+9,2809	,3010	,8194	217	+,011	+ ,14
2054	4	+36 2 47,53	20,000	+9,5899	+9,7690	,3010	,8175	220	—,004	— ,11
2055	4	+ 4 14 43,47	20,001	+9,6415	+8,8706	,3010	,8156	221	,000	— ,04
2056	4	+11 5 22,41	20,006	+9,6415	+9,2843	+1,3011	+8,7918	224	+,014	+ ,16
2057	4	+ 2 36 7,56	20,013	+9,6385	+8,6616	,3013	,7400	230	—,002	— ,26
2058	4	—30 25 19,24	20,017	+9,5416	—9,7036	,3014	,7090	234	+,039	— ,18
2059	4	+21 44 11,83	20,018	+9,6243	+9,5683	,3014	,6991	235	+,001	+ ,09
2060	4	+54 55 35,31	20,020	+9,4594	+9,9126	,3015	,6863	236	+,016	— ,03
2061	4	+10 33 41,17	20,023	+9,6375	+9,2636	+1,3015	+8,6567	238	+,009	— ,18
2062	4	— 4 53 37,74	20,025	+9,6314	—8,9282	,3015	,6426	241	+,011	— ,14
2063	4	+26 0 28,52	20,033	+9,6075	+9,6421	,3017	,5243	251	+,006	— ,01
2064	4	+33 44 31,88	20,041	+9,5682	+9,7449	,3019	,1880	267	+,071	+ ,03
2065	4	+63 52 3,55	20,041	+9,3096	+9,9532	,3019	,1627	269	+,021	+ ,03
2066	4	—10 31 40,98	20,042	+9,6284	—9,2606	+1,3019	+8,0765	273	+,024	— ,12

Digitized by Google

In addition to the foregoing catalogue—in the years 1836- 1837, the places of several Stars—whose *names only* occur in Vols. II and III—have been determined;—and several more—where the result of one observation only had been given, or where discordance among several observations had occurred or where a large proper motion was observed;—in all these cases, a re-examination of former results has been instituted, and further observations (when necessary) made, as follows.

SUPPLEMENTARY CATALOGUE OF THE A. R. OF THE FIXED STARS.

Reference. No.	Vol.	Names.		Mean A. R. Jan. 1, 1836—from: former obs.	present obs.	Concluded Mean A. R. Jan. 1, 1836.	Annual: Precesn.	P. M.	Remarks.
				s.	s.	h. m. s.	s.	s.	
2	of II	11 Cassiopeæ	β	6=28,19	3=28,59	0 0 28,32	+3,069	+0,081	Piazzi's P. M. is too small.*
2	. III	61 Andromed.		3= 1,22	3= 1,17	5 1,20	3,090	— ,007	
5	. III	96 Piscium		3=58,10	1=57,90	8 58,05	3,075	— ,010	The Paramatta observations reduced to 1836 give the place of this star 23′46s: Can the proper motion amount to, 536s.?
21	. II	Tucanæ	ζ	6=27,49	3=29,38	11	2,920	——	
41	. II	15 Cassiopæ	κ	5=44,19	3=44,50	23 44,31	3,324	+ ,027	
44	. II	Tucanæ	β^1	6=59,50	2=59,83	23 59,58	2,786	——	
45	. II	———	β^2	3= 0,36	2= 0,54	24 0,43	2,786	——	
46	. II	———	β^3	5=13,73	2=13,53	25 13,67	2,771	——	
51	. II	Hiscium		4= 7,83	1= 8,02	27 7,87	3,064	+ ,008	
27	. III	117 Andromed.		2=29,82	3=30,10	28 29,99	3,139	+ ,014	
55	. II	Ceti		4=55,00	3=55,01	28 55,00	2,988	+ ,110	4 obs. 1832=28m 42,62s; 3 — 1837=28 58,10 ∴ P. M. = +,108s
56	. II	Piscium		5= 4,16	2= 4,16	29 4,16	3,074	+ ,019	
31	. III	128 Andromed.		1=55,28	3=55,02	32 55,09	3,150	+ ,027	
66	. II	Ceti		5=30,66	1=30,73	34 30,67	2,991	+ ,007	These results appear discordant; but from the Proximity of this star to the pole, the disagreement=only 1″ of arc
91	. II	Cephei		4=37,24	3=38,14	47 37,63	6,468	+ ,197	
96	. II	38 Andromed.	η	7=27,92	1=27,71	48 27,89	3,183	+ ,015	
108	. II	74 Piscium	ψ^1	3=54,33	1=54,08	56 54,27	3,191	— ,003	
67	. III	μ Cassiopeæ		——	2=24,87	57 24,87	3,526	+ ,403	Piazzi says—the P. M. =+ 5″,70
69	. III	190 Piscium†		2=20,63	1=20,32	57 20,53	3,092	+ ,006	
109	. II	27 Ceti		4=24,38	1=24,35	57 24,37	3,005	+ ,011	
110	. II	28 Ceti		8=51,59	2=51,73	57 51,62	3,005	+ ,004	
112	. II	Phœnicis	β	6=45,45	3=45,16	58 45,35	2,698	——	
81	. III	181 Andromed.		1= 1,95	2= 1,73	1 1 1,80	3,377	— ,006	
123	. II	Phœnicis	ζ	2=28,35	2=28,55	1 28,45	2,542	——	
132	. II	Piscium	ζ^1	5=10,27	1=10,32	5 10,28	3,112	+ ,013	
91	. III	*b* Ceti		3= 8,59	3= 8,53	6 8,56	3,009	+ ,017	
135	. II	88 Piscium		6=11,00	1=10,99	6 11,00	3,108	+ ,009	
97	. III	φ Cassiopeæ		3=48,94	1=49,25	9 49,02	3,696	+ ,008	
98	. III	119 ———		2=12,98	2=14,97	10 14,97	3,890	+ ,087	The star observed in 1835 was Piazzi No. 39—Differs—1,42s. from A. S. C.
147	. II	37 ———	δ	9= 9,02	4= 9,16	15 9,06	3,790	— ,016	
102	. III	242 Piscium		3=14,41	1=14,71	15 14,48	3,096	+ ,005	
158	. II	———		5=47,59	2=47,55	19 47,58	3,124	+ ,006	
161	. II	Phœnicis	γ	6=14,34	2=14,27	21 14,32	2,619	+ ,017	
164	. II	Ceti		5=58,05	3=57,73	21 57,93	2,836	——	
167	. II	Phœnicis	δ	5=24,99	3=24,95	24 24,97	2,497	——	

* This may arise from a variation of the proper motion having taken place.

† See errata.

Digitized by Google

Reference. No.	Vol.	Names.		Mean A. R. Jan. 1, 1836.—from former obs.	present obs.	Concluded Mean A. R. Jan. 1, 1836.	Annual Precesn.	P. M.	Remarks.
				s.	s	h. m. s.	s.	s.	
170 of	II	100¹ Piscium		5= 9,60	3= 9,60	1 26 9,60	+3,169	+ ,010	
176 .	II	51 Andromed.	R²	6=57,82	1=57,92	27 57,84	3,617	+ ,017	
178 .	II	102 Piscium	π	10=24,86	2=24,93	28 24,87	3,168	+ ,004	
133 .	III	g Cassiopeæ		3=21,09	3=20,59	30 20,84	4,468	+ ,044	N. P. D. 20°,13′
135 .	III	49 Mach. Elect.		2= 8,16	2= 8,35	31 8,25	2,817	+ ,021	
138 .	III	137 Cassiopeæ		1=17,86	3=17,83	32 17,84	3,960	+ ,032	
146 .	III	e Rangifer.		3=39,92	4=40,53	38 40,27	5,572	+ ,105	
194 .	II	53 Ceti	χ²	6=32,12	6=31,97	41 32,04	2,952	+ ,005	
167 .	III	147 Cassiopeæ		2=57,26	2=57,53	48 57,39	5,624	+ ,088	
170 .	III	150 ———		1= 4,46	3= 5,43	50 5,19	5,435	+ ,020	N. P. D. 14°,42′ ∴ diff=3″,6 of arc.
280 .	II	57 Andromed.	γ	9=51,64	2=51,92	53 51,70	3,630	+ ,012	
181 .	III	37 Arietis		3=21,75	3=21,89	54 21,82	3,369	+ ,015	
201 .	III	b Andromed.		1=58,23	3=58,14	2 2 58,16	3,717	+ ,009	
205 .	III	262 ———		2=16,29	2=16,49	4 16,39	3,835	— ,024	
209 .	III	Mach. Elect.	β	1=40,97	1=41,26	5 41,11	2,641	+ ,005	
211 .	III	62 Arietis		1=23,59	1=23,57	6 23,58	3,395	+ ,020	
217 .	III	41 Persei		——	1=46,09	7 46,09	4,141	+ ,009	
224 .	III	265 Andromed.		1= 8,99	1= 9,50	10 9,25	3,908	+ ,018	
243 .	II	68 Ceti	o	6= 4,18	6= 4,26	11 4,22	3,021	+ ,012	
249 .	II	24 Arietis	ξ¹	5= 2,17	1= 2,27	16 2,19	3,197	+ ,008	
253 .	II	12 Trianguli	c	5=34,38	3=34,30	18 34,35	3,487	+ ,005	
238 .	III	46 Messoris		4=13,35	4=14,24	19 13,80	5,236	+ ,027	N. P. D. 19°,27′.
256 .	II	Eridani	κ	8=58,36	3=58,43	20 58,38	2,199	——	
248 .	III	Ceti		——	4=16,53	23 16,53	2,846	— ,001	
251 .	III	46 Trianguli		4=50,77	3=51,94	25 51,94	3,604	+ ,034	A wrong star observed in 1835.
268 .	II	Ceti		5= 5,87	5= 5,97	27 5,92	3,153	+ ,130	
253 .	III	d¹ ———		2= 7,08	1= 6,86	27 7,01	3,009	— ,005	
256 .	III	418 ———		——	4=18,74	29 18,74	3,167	+ ,021	
279 .	II	———		4=37,66	5=37,07	31 37,40	3,145	— ,010	the mean is erroneously stated to be 37,83*s*. in Vol. II.
283 .	II	34 Arietis	μ	5= 8,14	3= 8,07	33 8,12	3,357	+ ,023	
295 .	II	Hydræ		——	4= 6,06	37 6,06	0,868	——	differs 12*s*. from A. S. C.
306 .	II	Fornacis	β	5=13,72	1=13,77	42 13,73	2,502	+ ,009	
286 .	III	98 Persei		3=13,60	3=13,27	49 13,43	4,208	+ ,005	
324 .	II	Horologii	β	——	——	51 ——	1,222	——	*Not now visible.* !
325 .	II	Eridani	θ¹	5= 2,76	2= 2,47	52 2,68	2,277	— ,008	
337 .	II	Fornacis		——	——	55 ——	2,663	——	*Not now visible.* !
340 .	II	Persei		6=16,45	3=16,40	57 16,43	4,138	+ ,146	
346 .	II	Arietis		5=43,73	4=43,80	3 0 43,76	3,535	——	differs 4, 28*s* from A. S. C.
356 .	II	14 Eridani		5=39,45	3=39,20	8 39,36	2,899	+ ,019	
317 .	III	140 Persei		1=28,96	4=29,20	10 29,15	3,981	+ ,002	
318 .	III	63 Cuss. Mess.		3=30,92	3=31,33	10 31,12	5,095	+ ,018	
321 .	III	142 Persei		3=20,25	3=38,38	11 38,38	4,195	+ ,018	A wrong star observed in 1836.
329 .	III	———		3= 1,05	2= 1,36	20 1,17	4,179	+ ,010	
331 .	III	15 Tauri		3=27,48	3=27,95	20 27,71	3,366	+ ,006	Former observations discordant: 27, 8*s*. is probably nearer the truth than the mean.
332 .	III	16 ———		6=30,90	2=31,09	20 30,97	3,116	+ ,005	
333 .	III	Persei		3=35,11	4=35,12	20 35,11	4,187	+ ,004	
337 .	III	149 Eridani		3= 4,93	3= 5,27	22 5,10	2,056	— ,001	
341 .	III	Persei		4=21,19	3=20,97	27 21,10	3,690	— ,003	
399 .	II	41 ———	ν	9= 4,68	3= 4,77	34 4,70	4.035	+ ,019	
358 .	III	Fornacis		3=43,89	3=43,80	35 43,84	2,381	— ,002	

Digitized by Google

Reference. No. Vol.	Names.		Mean A. R. Jan. 1, 1836.—from former obs.	present obs.	Concluded Mean A. R. Jan. 1, 1836.	Annual Precesn.	P. M.	REMARKS.
			s.	s.	h. m. s.	s.	s.	
363 of III	27 Psalt. Georg.		——	4=33,75	3 36 33,75	+3,053	+ ,007	
365 . III	12 Pleiadum		——	4=37,00	37 37,00	3,543	+ ,017	
369 . III	118 Tauri		4=	2=28,75	39 28,75	3,541	+ ,016	A wrong star observed in 1835.
373 . III	132 ——		1=14,19	2=14,47	40 14,38	3,504	+ ,011	
424 . II	28 Eridani		5=36,75	8=36,82	40 36,80	2,571	— ,033	
374 . III	Fornacis		——	2=42,07	40 42,07	2,436	+ ,006	
378 . III	206 Eridani		——	2=39,60	41 39,60	2,251	+ ,002	
380 . III	H Camelop.		——	3= 1,35	43 1,35	5,200	+ ,015	
445 . II	35 Eridani		6=13,76	1=13,49	53 13,72	3,028	+ ,001	
403 . III	171 Tauri		*3= 4,41	3= 4,38	55 4,40	3,224	+ ,022	The place of this star as given in Vol. III. is erroneous to the amount of a years precession.
455 . II	Reticuli	γ	8=32,79	3=32,82	58 2,80	0,841	— —	
454 . II	Tauri		6=36,42	1=36,45	58 36,43	3,418	+ ,007	
421 . III	205 ———		2=45,54	1=45,15	4 6 45,41	3,188	— ,005	
432 . III	o^1 Eridani		——	3=51,35	12 51,35	2,501	+ ,008	
433 . III	Z ———		1= 4,47	3= 4,44	13 4,45	3,058	— ,002	Piazzi properly places this star in the constellation Taurus.
436 . III	220 Persei		*3= 0,43	4= 0,44	14 0,44	3,858	+ ,019	
500 . II	Reticuli	θ	4=51,29	3=51,65	15 51,45	0,643	——	
503 . II	71 Tauri		4= 0,62	3= 0,54	17 0,59	3,395	+ ,025	
508 . II	75 ———		5= 4,29	1= 4,41	19 4,31	3,414	+ ,001	
445 . III	265 ———		1= —	4=11,00	21 11,00	3,388	+ ,013	
447 . III	269 Tauri		——	4=24,32	21 24,32	3,412	+ ,020	
529 . II	88 ———	d	4=38,88	1=39,08	26 38,92	3,280	+ ,007	
463 . III	335 Eridani		——	3=29,77	27 29,77	2,393	— ,001	
465 . III	Scep. Brand.		3=58,03	1=57,56	28 57,92	2,877	— ,005	
467 . III	40 Camelop.		——	3=39,67	30 39,67	6,502	+ ,036	
555 . II	96 Tauri	K	5=21,53	2=21,66	40 21,56	3,419	+ ,014	
499 . III	52 Camelop.		3= 4,30	4= 4,75	44 4,56	7,429	— ,018	
577 . II	10 ———	d'	6=51,51	2=52,29	48 51,71	5,286	+ ,005	
515 . III	Eridani		——	3=40,41	51 40,41	2,829	+ ,003	
518 . III	61 Camelop.		1=57,58	3=57,83	51 57,77	5,176	+ ,010	
523 . III	e Aurigæ		——	3=31,61	54 31,61	5,504	+ ,014	
530 . III	b ———		4=30,87	2=31,08	58 30,94	4,439	+ ,014	
610 . II	Doradus	ζ	7=42,53	4=42,68	5 2 42,58	1,021	——	
622 . II	Columbæ		5=49,99	2=49,70	8 49,91	2,400	+ ,006	
554 . III	2 ———		1=54,00	3=53,87	9 53,90	2,151	+ ,003	
626 . II	Leporis		5= 8,50	3= 8,46	10 8,49	2,750	——	
635 . II	22 Orionis	o	——	6=23,68	13 23,68	3,055	+ ,016	
641 . II	Eridani		6= 2,78	3= 2,62	15 2,73	2,459	+ ,011	
577 . III	367 Tauri		4=49,63	1=49,34	20 49,57	3,609	+ ,006	
661 . II	25 Aurigæ	χ^1	12= 3,61	3= 3,67	22 3,62	2,941	+ ,011	The place now observed agrees with Piazzi, but differs 8,21*s*. from A. S. C.
594 . III	27 Columbæ		——	3=56,73	26 56,73	1,697	+ ,006	
679 . II	41 Orionis	θ^1	——	6=13,28	27 13,28	2,941	,000	
597 . III	84 Camelop.		4= 3,72	1= 4,16	29 3,81	5,495	— ,014	
691 . II	47 Orionis	ω	6=31,88	3=31,75	30 31,84	3,161	+ ,010	The place now observed agrees with Piazzi, but differs nearly 5*s*. from the A. S. C.
609 . III	393 Tauri		1=15,34	3=15,11	33 15,17	3,524	+ ,014	
626 . III	Columbæ		1= 5,63	3= 5,51	38 5,54	1,972	+ ,007	
743 . II	Aurigæ		5=42,21	2=42,11	50 42,18	3,765	+ ,006	
658 . III	κ Camelop.		——	3=29,06	51 29,06	4,752	+ ,005	
677 . III	Columbæ		1=45,72	4=45,39	59 45,45	1,730	— ,001	
447 . IV	Geminor.	*seq.*	——	1= 7,54	6 4 7,54	3,663	— ,001	This observation was omitted.

* See errata.

Digitized by Google

Reference. No.	Vol.	Names.			Mean A. R Jan. 1, 1836.—from former obs.	present obs.	Concluded Mean A. R. Jan. 1, 1836.	Annual Precesn	P. M.	REMARKS.
					s.	s.	h. m. s.	s.	s.	
785 of	II		Orionis	l	*5= 4,65	4= 4,15	6 8 4,43	+3,303	+ ,010	The results in each year agree very well *inter—se*: —this Star must be re-examined.
452 .	IV		Monocer.		——	3=18,65	8 18,65	2,767	+ .008	These observations were omitted.
703 .	III	25	Monocer.		2=60,70	3=52,04	9 52,04	2,817	— ,017	In 1835 a wrong star appears to have been observed; —on the present occasion the small star mention by P. was observed; preceding 25 min. 15 05*s*.
710 .	III	31	Geminor.		1=33,46	3=33,44	11 33,44	3,586	+ ,007	
716 .	III	9	Lyncis		4=29,06	2=29,52	12 29,21	5,243	— ,001	
718 .	III		Canis Maj.		*1=55,90	2=56,17	14 56,08	2,300	+ ,014	The result in Vol. III belongs to Piazzi, No. 81.
793 .	II		Monocer.		6=39,90	1=39,73	14 39,88	3,158	+ ,005	
——			Geminor.		3=59,24	6=59,20	17 59,21	3,576	+ ,012	Omitted in Vol. III.
799 .	II	15	———		5= 0,07	6= 0,12	18 0,10	3,576	+ ,009	
728 .	III	11	Navis		4=19,94	2=19,95	18 19,94	2,078	+ ,002	
805 .	II	17	Geminor.		* ——	2=25,28	19 25,28	3,588	——	This Star is now of the 9,10 mag.
739 .	III	120	Camelop.		3=26,42	3=23,56	21 25,04	30,934	+ ,066	N. P. D. = 2°,44′ ∴ diff. = 2″,04 of arc.
758 .	III	50	Geminor.		——	4=32,33	26 32,33	3,474	+ ,007	
760 .	III	26	Navis		——	3=44,05	26 44,05	2,047	+ ,002	
770 .	III	6υ[1]	Canis *præc.*		3=12,14	3=12,26	29 12,20	2,624	+ ,005	
772 .	III		Lyncis		1=20,05	5=20,63	30 20,54	5,326	+ ,007	
774 .	III	22	———		——	3=27,78	30 27,78	5,114	+ ,019	
783 .	III		Camelop.		——	3=52,60	32 52,60	6,291	+ ,012	
835 .	II	43	———	q	6=58,92	6=59,29	35 59,10	6,522	— ,019	This — P. M. partly accounts for the difference (nearly 2*s*) from the A. S. C.
794 .	III		Monocer.		1=51,29	3=51,47	37 51,43	3,254	+ ,013	
795 .	III	49	Navis		1=54,82	2=55,08	37 54,99	1,999	+ ,039	
840 .	II	18	Monocer.	k	6=18,56	1=18,28	39 18,52	3,128	+ ,005	
807 .	III	29	Lyncis		4=10,95	3=11,24	43 11,07	5,148	+ ,014	
848 .	II	13	Can. Maj.	κ[2]	19=43,04	1=43,04	43 43,04	2,238	+ ,004	
855 .	II		Geminor.		6=44,21	3=44,17	46 44,20	3,492	+ ,010	
814 .	III		Lyncis		3= 6,34	1= 6,69	47 6,43	5,143	+ ,009	
827 .	III	131	Camelop.		*3=54,07	3=56,23	53 55,15	11,802	— ,036	N. P. D. = 8°,27′
832 .	III		Monocer.		——	4=18,50	54 18,50	2,977	+ ,013	
888 .	II	51	Geminor.		12=56,99	1=57 25	7 3 57,02	3 447	+ ,007	
901 .	II		Piscis. Vol.	γ	6= 6,92	4= 6,48	10 6,74	—0,475	——	
881 .	III		Lyncis		1=48,03	2=48,31	11 48,22	+5,013	+ ,003	
891 .	III	144	Geminor.		——	3=20 90	14 20,90	3,740	+ ,011	
910 .	III		Navis		1= 9,63	3= 9,49	22 9,52	2,380	+ ,014	
925 .	III	153	Camelop.		5=47,51	3=49,02	28 48,08	10,586	+ ,198	
936 .	III		———		——	3=33,56	32 33,56	10,237	+ ,019	
954 .	III		Off. Typ.		——	3=48,67	40 48,67	2,815	+ ,015	
966 .	III		———		1=51,54	3=51,53	44 51,53	2,781	+ ,011	
974 .	II	11	Argus		6=48,72	3=48,74	49 48,73	2,578	+ ,003	
980 .	III		Camelop.		4=43,11	3=43,38	51 43,23	4,972	+ ,005	
982 .	II		Argus	χ	8=36,26	2=36,26	52 36,26	1,530	——	
988 .	II	55	Camelop.		6=23,61	3=23,77	56 23,67	6,107	——	
993 .	III		Navis		1=11,31	2=11,51	57 11,41	2,659	+ ,015	
997 .	II		Cancri		——	6=19,62	8 2 19,62	3,278	+ ,004	
1024 .	II		———	φ[2]	——	6=51,22	16 51,22	3,643	+ ,001	
1029 .	II		Argus		6=59,24	2=59,25	17 59,24	2,589	+ ,026	
1038 .	II	34	Cancri		6=44,34	4=43,86	23 44,15	3,271	+ ,014	
1041 .	II		Monocer.		5= 8,94	2= 9,07	24 8,98	2,696	+ ,022	
1049 .	II		Cancri		5=25,79	2=25,83	30 25,80	3,457	+ ,016	
1057 .	III	102	Cancri		4=56,91	1=56,76	30 56,88	3,457	+ ,020	
1055 .	II		———		9= 2,12	1= 1,95	31 2,10	3,456	+ ,003	

* See errata.

Digitized by Google

Reference. No.	Vol.	Names.	Mean A. R. Jan. 1, 1836—from former obs.	present obs.	Concluded Mean A. R. Jan. 1, 1836.	Annual Precesn.	P. M.	Remarks.
			s.	s.	h. m. s.	s.	s.	
1067	of III	Navis d	1=32,08	2=32,78	8 38	+2,139		The Paramatta obs. differ 3s. from this result.
1068	. III	133 Cancri	3=38,48	2=38,98	39 38,68	3,307	+ ,020	
1105	. II	Argus c	20=30,25	4=29,69	58 30,16	2,068	———	The Paramatta observations with the Transit, differ 1,32s from this result.
1109	. III	209 Cancri	3=51,10	3=51.39	9 0 51,24	3,272	+ ,004	
1112	. II	Pixid Naut.	6=50,94	2=51,38	0 51,05	1,498	+ ,012	
1118	. III	Hydræ	5=51,00	1=51,02	6 51.03	2,935	+ ,008	
1121	. III	Navis k¹	8=25,11	2=25,20	8 25,13	2,384	— ,008	
1127	. II	24 Hydræ	5=38,94	1=39,51	8 39,03	2,940	— ,009	
1132	. II	Leonis	5=37,50	4=37,62	11 37,55	3,523	———	
1148	. II	Ursæ Maj. d	10=50,55	3=50,88	19 50,63	5,500	— ,021	N. P. D. 19°,26′.
1155	. II	Leonis h	6= 9,79	3= 9,87	23 9,82	3,224	+ ,022	
1162	. III	88 Ursæ Maj.	4=40,50	3=41,07	27 40,74	5,761	— ,016	
1185	. III	66 Leonis	——	3=30,97	38 30,97	3,370	+ ,022	
1191	. II	9 Sextantis	6=32,30	2=32,57	45 32,37	3.143	+ ,011	
1226	. II	Autl. Pneum.	6=37,14	3=37,33	10 10 37,20	2,739	+ ,013	
1233	. II	Leonis z	——	1=25,38	14 25,38	3,145	+ ,002	
1256	. III	Leonis	——	3=56.91	16 56.91	3,166	+ ,011	
1260	. III	Sextantis	——	3=12,77	19 12.77	3,067	+ ,012	
1246	. II	28 ——— k	5= 8,25	5= 8 94	21 8,60	3,050	— ,004	
1268	. III	Ursæ Maj.	3=24,11	1=23,81	23 24,04	3,828	+ ,009	
1270	. II	34 Sextantis	7= 9,45	3= 9,39	34 9,43	3,106	+ ,033	
1275	. II	36 ———	4=42,77	3=42.54	36 42,67	3,096	+ ,015	
1276	. II	Argus	18= 7,49	2= 7,56	37 7,50	2,117	———	
734	. IV	Sextantis	5= 4,67	2= 4.97	42 4,76	3.006	+ ,032	These observations were omitted in the Catalogue.
1311	. III	Hydræ	——	3=28,71	46 28,71	2,920	— ,007	
1294	. II	Argus u	11=51,61	4=51.48	46 51,58	2,396	———	
1328	. III	Leonis p¹	3=13.16	2=13,20	55 13.18	3,073	+ ,009	
1329	. III	216 Ursæ Maj.	3=22,96	1=22,98	55 22.96	3,369	+ ,014	
748	. IV	Leonis	1= 4,71	4= 4,70	58 4,70	3,118	+ ,008	These observations were omitted in the Catalogue.
1341	. III	Ursaæ Maj.	3=10,40	2=10,55	11 0 10,46	3,558	+ ,006	
1344	. III	223 Ursæ Maj.	3=57.36	1=57,64	1 57,43	3,447	+ ,010	
1350	. III	———	1= 4,84	3= 4.90	5 4,89	3,500	+ ,010	
1353	. III	322 Leonis	2=22·26	1=22,20	7 22.24	3,141	+ ,029	
1368	. III	Hydræ X¹	1=17,51	2=17,27	15 17,35	2,886	+ ,011	
1370	. III	370 Leonis	3=43,89	4=43,67	16 43,76	3,097	+ ,006	
1376	. III	Hyd. & Crat.	1=15,20	2=14,88	19 14,99	3,020	+ ,016	
1353	. II	———	7=36,20	2=36,14	23 36,18	3,047	+ ,003	
1354	. II	17 Crateris	6= 9,45	2= 9,25	24 9,40	2,955	— ,014	
1355	. II	———	5=27,97	3=27,76	24 27,89	3,043	+ ,016	
1411	. III	Hydræ •	1= 4,55	3= 4,86	32 4,78	2,960	— ,006	
1416	. III	——— V	3=33,75	1=33,75	33 33,75	2,974	+ ,013	
1427	. III	Leonis	1=31,72	3=32,14	40 32,03	3.099	— ,004	
1388	. II	Virginis	6=38,31	4=38,25	52 38,29	3,067	+ ,007	
1454	. III	Corvi	1=36,91	3=36,61	11 54 36,69	3,056	+ ,007	
1400	. II	3 ———	5=38,34	4=38,12	12 2 38,25	3,074	+ ,014	
1406	. II	Crucis δ	13=29.50	4=28,90	6 29,37	3,125	———	Differs 2s. + from A. S. C.
1493	. III	Virginis g	3=45,06	2=45,60	9 45,28	3,071	+ ,006	
1496	. III	18 Canum Ven.	——	1=14,56	10 14,56	3,028	+ ,006	
1412	. II	13 Virginis n	14=16,05	4=16,19	10 16,08	3,068	+ ,011	
1500	. III	45 Comæ Ber.	1=16,52	3=16,26	11 16,33	3,031	,000	

Digitized by Google

Reference. No.	Vol.	Names.	Mean A. R. Jan. 1, 1836.—from former obs.	present obs.	Concluded Mean A. R. Jan. 1, 1836.	Annual Precesn.	P. M.	Remarks.
			s.	s.	h. m. s.	s.	s.	
1501	of III	19 Draconis.	——	3=25,96	12 11 25.96	+2,796	+ ,069	
1503	. III	26 Corvi.	1=42,05	3=42,06	11 42,06	3,095	— ,007	
1516	. III	Comæ Ber.	——	3=49,16	15 49,16	3,021	+ ,011	
1445	. II	20 Virginis.	5=44.86	4=44,87	24 44.86	3,040	+ ,006	
1540	. III	Corvi.	2=29,34	3=29,27	25 29,30	3,130	+ ,028	
1544	. III	Comæ Ber.	1=35,20	3=35,78	26 35,64	2,995	+ ,007	
1460	. II	26 Virginis χ	6=47.53	4=47,35	30 47,46	3,090	+ ,011	
1562	. III	311 Virginis.	1=10.19	3=10,23	38 10,22	3,028	+ ,013	
1577	. III	Comæ Ber.	3= 5 97	1= 6,27	43 6,04	2,977	+ ,011	
828	. IV	—— pre.	2=47,65	3=47,82	43 47,71	2,975	+ ,038	These were omitted in the Catalogue.
1578	. III	——	3=47,69	1=48,12	43 47,79	2,975	+ ,017	
1598	. III	Centauri.	3= 4,52	3= 4,24	52 4,38	3.262	— ,004	
1604	. III	—— g	1=45,19	4=44,90	54 44,96	3.277	+ ,010	
1503	. II	14 Canum Ven. f	——	3= 3,98	58 3.98	2,820	+ ,011	
1615	. III	456 Virginis.	1=16,08	·3=16,14	13 2 16,12	3,126	— ,003	
1619	. III	Centauri. m	1=56,37	3=56,03	2 56,12	3,341	— ,018	
1639	. III	205 Comæ Ber.	3=15.86	1=15.77	12 15.84	2,928	+ ,016	
1649	. III	Ursæ Maj.	3=18.96	2=18.83	18 18.93	2.410	+ ,013	
1659	. III	—— y	3=25.40	1=25,28	22 25,37	2.227	+ ,002	
1660	. III	Virginis.	*3=22,83	2=22,90	23 22,86	3,080	— ,043	
1668	. III	7 Bootis.	——	3=57.60	26 57.60	2.951	+ ,009	
1694	. III	Virginis.	1=11,23	3=11,17	37 11,19	3,169	— ,004	
1565	. II	86 —— o	6=12,68	1=12,94	37 12,72	3,180	+ ,010	
1568	. II	3 Bootis.	——	3= 6,29	39 6.29	2,789	+ ,005	
1570	. II	Centauri ν	——	2=42,19	39 42,19	3,553	+ ,005	
1728	. III	Bootis.	3=45,13	2=45,05	50 45.10	2,897	+ ,004	
1594	. II	Virginis.	5=26.72	1=26,48	51 26,68	3,148	+ ,012	
1608	. II	96 —— y	7=16.99	2=16,86	14 0 16,95	3,180	+ ,010	
1753	. III	——	2=37,15	3=37.30	1 37,24	2,936	+ ,010	
1759	. III	642 ——	3=17,73	3=17,39	3 17,51	3,131	+ ,013	
936	. IV	Bootis.	3=40,28	3=40,30	4 40 30	2,961	+ ,007	These observations were omitted in the Catalogue.
1768	. III	—— κ	3=36,19	1=36,32	7 36,22	2,146	+ ,028	
1627	. II	18 —— t	——	4=20,16	11 20,16	2,891	+ ,019	
1630	. II	7 Hydræ.	6=40,13	1=39,97	13 40,11	3,442	— ,002	
1633	. II	Solitarii.	——	4=28,47	15 28,47	3,399	+ ,009	
1795	. III	Bootis.	——	2=34.29	18 34,29	2,792	+ ,009	
1801	. III	Hydræ.	——	2= 0,18	21 0,18	3,489	— ,018	
954	. IV	Virginis.	4= 2.10	1= 1,84	25 2,05	3,153	+ ,009	This observation was omitted in the Catalogue.
1822	. III	——	3=36,06	2=35,80	28 35,96	3,113	— ,001	
963	. IV	Libræ.	2=28,51	2=28,46	33 28,48	3,236	— ,004	These observations were omitted in the Catalogue.
1671	. II	11 Hydræ.	——	4=51,50	37 51,50	3,462	+ ,014	
1673	. II	Libræ.	——	4=55.37	37 55.37	3,387	+ ,011	
1676	. II	13 Hydræ.	——	4=23.19	38 23,19	3,481	+ ,008	
1854	. III	Libræ.	2=25,49	1=25,61	45 25,53	3,064	+ ,007	
1690	. II	——	5=54,30	5=54,55	47 54,42	3,404	+ ,079	Differs 3s. from A. S. C. See Piazzi's Note.—
1696	. II	1 Serpentis.	——	4= 9,15	49 9,15	3.060	+ ,011	
1698	. II	Bootis.	——	3=32,96	49 32,96	2,792	+ ,006	
1702	. II	Libræ.	6=25,37	2=25.37	53 25,37	3,179	+ ,005	
1707	. II	41 Bootis. ω	——	4=55,57	54 55 57	2,642	+ ,016	
1709	. II	Libræ	——	3=42,12	56 42,12	3,456	+ ,017	

* See errata.

Digitized by Google

Reference. No.	Vol.	Names.		Mean A. R. Jan. 1, 1836.—from former obs	present obs.	Concluded Mean A. R. Jan. 1, 1836.	Annual Precesn.	P. M.	REMARKS.
				s.	s.	h. m. s.	s.	s.	
1879 of	III	33 Ursæ Min.		——	2=12,87	14 56 12,87	—0,537	+ ,019	
1885 .	III	—— ——		2= 4,36	3= 5,13	58 4,82	—0,567	+ ,012	N. P. D. 14°,28′.
1718 .	II	Lupi	κ¹	——	5=34,63	15 0 34,63	+4,121	——	κ² follows at 0m. 36,16s.
1719 .	II	46 Bootis	b	——	3=19,10	1 19,10	2,585	+ ,009	
1720 .	II	——		——	3=26,84	1 26,84	2,610	+ ,004	
1898 .	III	97 Libræ		3=12,84	3=12,81	5 12.82	3,378	— ,001	
1727 .	II	3 Serpentis		——	4= 2,57	7 2,57	2,973	+ ,004	
1736 .	II	5 ——		——	4=56.95	10 56.95	3,026	+ ,032	
1737 .	II	Bootis		——	4= 3,45	11 3,45	2,685	+ ,003	
1743 .	II	6 Serpentis		——	4=41,54	12 41,54	3,045	+ ,024	
1906 .	III	Cor. Bor.	o	3=21,68	1=21,65	13 21,67	2,487	+ ,003	
1744 .	II	30 Libræ	o²	——	2=53,90	13 53,90	3,327	+ ,008	
1001 .	IV	Cor. Bor.		2=32,82	1=32,58	13 32,74	2,484	+ ,001	This observation was omitted in the Catalogue.
1752 .	II	Libræ		——	3=55.57	20 55,67	3,375	——	
1757 .	II	Triang. Aust.	ε	——	4=49,09	21 49,09	5,349	——	
1763 .	II	37 Libræ	f¹	7=13,30	1=13.48	25 13,32	3,242	+ ,023	
1768 .	II	39 ——		——	3= 5,22	27 5,22	3,615	+ ,006	
1769 .	II	Scorpii		——	2=39,18	27 39,18	3,574	+ ,010	
1771 .	II	15 Serpentis		——	2= 6.20	28 6,90	2,721	+ ,003	
1772 .	II	14 ——	A¹	——	2= 9,37	28 9,37	3,068	+ ,006	
1773 .	II	Libræ		——	2=18.69	28 18,69	3,619	+ ,008	
1776 .	II	18 Serpentis	τ²	——	2=56,04	28 56,04	2.752	+ ,009	
1778 .	II	41 Libræ	φ	——	3=29,14	29 29,14	3.427	+ ,021	
1779 .	II	Lupi	g	——	1=54,55	29 54.55	4.093	+ ,071	
1790 .	II	8 Cor. Bor.	γ	——	4=51,45	35 51,45	2,522	+ ,010	
1792 .	II	15 Ursæ Min.	θ	——	4=26,03	36 26,03	—1,977	— ,034	
1804 .	II	36 Serpentis	b	——	4=43,51	42 43,52	+3,118	+ ,003	
1805 .	II	10 Cor. Bor.	δ	——	4=43,11	42 43.11	2,516	+ ,002	
1808 .	II	Scorpii	f¹	——	4= 8,10	44 8,10	3.561	+ ,033	
1965 .	III	Lupi	ξ	3=25,60	2=25,51	46 25,56	3,806	+ ,006	
1032 .	IV	——	ξ²	——	2=26,17	46 26,17	3,807	+ ,020	These were emitted in the Catalogue.
1966 .	III	100 Serpentis		3=45,22	4=45,14	46 45,17	2,890	+ ,012	
1817 .	II	Serpentis		——	4=21,13	47 21,13	2,643	— ,002	On the 11th June 1837 a star was observed at the Transit, following at 0, 42s.
1821 .	II	Lupi	η	——	4=16 60	49 16.60	3.943	+ ,002	
1824 .	II	16 Ursæ Min.		——	4= 4,50	50 4,50	—2,371	+ ,023	
1835 .	II	Lupi	θ	——	4=50,77	55 50,77	+3,909	+ ,011	
1987 .	III	——		3=30,36	4=30.52	56 30,45	3,911	+ ,012	
1988 .	III	——		——	2=49,15	56 49,15	3,911	+ ,008	
1839 .	II	6 Herculis	υ	——	4=41,55	57 41,55	1,856	+ ,019	
1838 .	II	10 Scorpii	ω²	——	3=48,01	57 48,01	3,496	+ ,013	
1992 .	III	Serpentis		——	1= 2,75	58 2,75	2,857	+ ,003	
1847 .	II	7 Herculis	κ¹	——	2=40.51	16 0 40,51	2,703	+ ,002	
1848 .	II	Scorpii		——	2=51,89	0 51,89	3,709	— ,001	
1850 .	II	13 ——	c²	——	2=13,01	2 13,01	3.673	,000	
1853 .	II	16 ——		——	3=14,68	3 14,68	3,234	+ ,012	
1855 .	II	48 Serpentis		——	3= 3,38	4 3,38	2,708	+ ,005	
1856 .	II	10 Herculis	T	——	4=39,14	4 39,14	2,549	+ ,004	
2014 .	III	37 ——		3=12,79	1=13.17	8 12,88	2,656	+ ,010	
1866 .	II	Scorpii	h	——	4=11,43	9 11,43	3,764	+ ,016	
2018 .	III	101 ——		1=29,02	3=29,47	10 29.36	3,492	+ ,020	

Digitized by Google

Reference. No.	Vol.	Names.		Mean A. R. Jan. 1, 1836.—from former obs.	present obs.	Concluded Mean A. R. Jan. 1, 1836.	Annual Precesn.	P. M.	Remarks.
				s.	s.	h. m. s.	s.	s.	
1058 of	IV	Scorpii	*præc.*	1=55,11	1=55,16	16 10 55,14	+3,494	+ ,001	Omitted in the Catalogue.
1059 .	IV	——	*seq.*	1=55,69	1=55,49	10 55,59	3,494	— ,006	Do. Do.
1877 .	II	5 Ophiuchi	*g*	3=45,65	2=46,00	15 45,79	3,578	+ ,004	
1881 .	II	21 Cor. Bor.	ν^2	——	4=18,75	16 18,75	2,255	+ ,017	
1072 .	IV	Scorpii		4= 2,53	3= 2,34	20 2,45	3,627	+ ,012	
1888 .	II	22 Scorpii	*i*	——	4=15,41	20 15,41	3,626	+ ,010	
2076 .	III	Ursæ Min.		——	4= 1,41	35 1,41	—3,528	— ,021	
2078 .	III	Draconis		——	4= 1,18	36 1,18	+0,771	+ ,007	
2080 .	III	——		——	4=22,05	37 22,05	1,179	+ ,027	
1086 .	IV	Scorpii		——	1=25,35	39 25,35	4,183	— ,010	This observation was omitted in the Catalogue.
1921 .	II	Scorpii	μ^2	——	3=14,78	41 14,78	4,040	+ ,005	
2094 .	III	151 ——		3=32,42	2=32,68	42 32,52	4,185	— ,001	
2097 .	III	150 Scorpii	*var.*	——	2=42,10	42 42,10	4,187	+ ,026	
2101 .	III	Draconis		——	4=30,11	43 30,11	1,217	+ ,035	
1930 .	II	51 Herculis	χ^2	——	2=57,48	44 57,48	2,480	+ ,005	
1929 .	II	Aræ	ζ	——	2= 5,16	45 5,16	4,922	——	
1933 .	II	——	ε	——	2=32,73	46 32,73	4,743	——	
1938 .	II	54 Herculis		——	2= 9,84	48 9,84	2,638	— 0,03	
1939 .	II	Ophiuchi		——	4=55,99	49 55,99	3,657	+ 0,13	
2113 .	III	90 ——		——	3=59,30	49 59,30	3,429	+ 0,12	
1942 .	II	Ophiuchi		5=12,08	1=12,07	50 12,08	3,481	+ ,016	
2119 .	III	Herculis		——	6=32,23	52 32,23	2,818	+ ,010	
2123 .	III	103 Ophiuchi		——	4=38,89	54 38,89	3,677	+ ,002	
1950 .	II	19 Draconis	*h*	3=8,07	2= 8,57	55 8,27	0,266	+ ,048	N. P. D, = 24°,36′.
2125 .	III	122 ——		1=36,84	2=37,39	55 37,21	0,279	+ ,004	N. P. D, = 24°,43′.
1953 .	II	32 Ophiuchi		——	4=37,36	55 37,36	2,740	+ ,013	
1956 .	II	——		——	4= 5,62	57 5,62	3,083	+ ,011	
1958 .	II	——		4=43,99	2=44,12	58 44,03	3,471	+ ,007	
2139 .	III	Herculis		——	3=28,93	17 0 28,93	1,581	+ ,020	
1965 .	II	29 Scorpii		——	3= 2,39	4 2,39	3,722	+ ,010	
2150 .	III	Draconis		——	3=38,77	4 38,77	1,146	— ,002	
2154 .	III	129 ——		——	2=13,31	6 13,31	0,688	+ ,012	
2155 .	III	Herculis		3=20,03	2=20,35	6 20,16	2,725	+ ,007	
1973 .	II	39 Ophiuchi	*o*	——	2= 1,15	8 1,15	3,650	+ ,001	
1974 .	II	——		——	2= 6,76	8 6,76	3,644	+ ,020	
1977 .	II	22 Draconis	ζ	——	2=19,52	8 19,52	0,153	+ ,004	
1979 .	II	Ophiuchi		——	2=21,09	10 21,09	3,481	+ ,009	
1983 .	II	Aræ	γ	——	2=36,94	11 36,94	5,019	——	Differs 1″,60 from A. S. C.
1984 .	II	——	β	——	2=41,29	11 41,29	4,958	——	
2174 .	III	Ophiuchi		3=53,77	2=53,70	16 53,75	3,580	+ ,005	
2004 .	II	Ophiuchi		2=28,06	3=27,96	20 28,00	3,057	+ ,003	
2014 .	II	54 ——		——	2=49,30	26 49,30	2,756	+ ,022	
2195 .	III	Herculis		——	3=52,21	28 52,21	1,521	+ ,009	
2022 .	II	24 Draconis	ν^1	——	2=57,27	28 57,27	1,156	+ ,029	
2023 .	II	25 ——	ν^2	——	2= 2,42	29 2,42	1,157	+ ,028	
2030 .	II	27 Draconis	*f*	1=37,86	2=38,00	32 37,95	—0,290	+ ,003	
2213 .	III	323 Herculis		——	3=59,30	34 59,30	+2,458	+ ,008	
1185 .	IV	83 ——		2=45,14	2=45,09	35 45,11	+2,458	+ ,001	
2217 .	III	144 Draconis		——	1=13,76	37 13,76	—1,668	— ,022	
2220 .	III	Ophiuchi		2=54,13	3=54,57	37 54,40	+2,929	+ ,003	

Digitized by Google

Reference. No. Vol.	Names.		Mean A. R. Jan. 1, 1836.—from former obs	present obs.	Concluded Mean A. R. Jan. 1, 1836.	Annual Precesn.	P. M.	REMARKS.
			s.	s.	h. m. s.	s.	s.	
2041 of II	28 Draconis	ω	3=54,65	2=55,19	17 37 54,87	−0,367	+ ,005	
2221 . III	Ophiuchi		*4=55,07	4=55,23	37 55,15	+2,934	+ ,006	
2222 . III	———		——	2=39,44	38 39,44	2,932	+ ,015	
1194 . IV	———		2= 0,46	1= 0,18	39 0,37	2,934	+ ,009	This observation was omitted in the Catalogue.
2047 . II	Sagittarii		——	1=39,86	40 39,86	3,852	+ ,014	
2232 . III	Telescopii		——	2=57,63	41 57,63	3,969	+ ,018	
2233 . III	Ophiuchi		——	1= 7,13	42 7,13	3,539	+ ,010	
2234 . III	Telescopii		——	1=27,08	42 27,08	3,996	+ ,004	
2236 . III	———	η	1=58,90	1=59,14	42 59,02	3,992	+ ,002	
2246 . III	356 Herculis		——	3=46,06	45 46,06	1,563	+ ,020	
2251 . III	Herculis		——	2=44,75	46 44,75	1,948	+ ,010	
2062 . II	6 Sagittarii		——	2=51,71	51 51,71	3,480	− ,005	
2063 . II	———		1=58,34	5=58,45	51 58,43	3,628	+ ,004	
2064 . II	66 Ophiuchi	n	——	1= 8,54	52 8,54	2,970	+ ,001	
2065 . II	94 Herculis	ν	——	2=13,92	52 13,92	2,291	+ ,018	
2261 . III	19 Sagittarii		——	1=35,27	52 35,27	3,632	,000	
2067 . II	7 ———	a	4=48,53	1=48,13	52 48,45	3,670	+ ,007	Differs 1,5s. from A. S. C.
2069 . II	Sagittarii		——	1=50,52	52 50,52	3,573	+ ,002	
2070 . II	Tauri Pon		——	1=53,21	52 53,21	2,921	+ ,019	
2073 . II	Aræ	θ	——	1=52,35	53 52,35	4,665	——	
2264 . III	Sagittarii		——	1=59,71	53 59,71	3,630	+ ,002	
2266 . III	Telescopii	B	3=58,67	1=58,55	54 58,64	4,333	− ,011	
2268 . III	Draconis		——	2=54,77	55 54,77	−2,743	+ ,017	
2084 . II	———		——	5=47,15	56 47,15	−2,710	− ,018	
2083 . II	Sagittarii		——	3=21,71	57 21,71	+3,593	+ ,012	
2281 . III	Sagittarii		——	1=22,24	18 0 22,24	3,721	− ,006	
1246 . IV	———		3=29,20	2=29,15	7 29,18	4,085	− ,003	These observations were omitted in the Catalogue.
2298 . III	Clyp. Sob.		1=20,80	2=20,96	12 20,91	3,460	+ ,008	
2109 . II	58 Serpentis	η	——	3=49,70	12 49,70	3,092	− ,008	
2110 . II	20 Sagittarii	ε	7=17,15	1=17,21	13 17,16	3,983	− ,001	
2119 . II	Pavonis	ν	——	2= 3,37	16 3,37	5,615	——	
2306 . III	167 Draconis		3=13,70	2=14,10	16 13,86	−0,350	+ ,005	
2311 . III	Sagittarii		2=——	4=15,87	19 15,87	+3,938	+ ,009	
2125 . II	Clyp. Sob.		6=50,94	3=51,17	19 51,02	3,416	——	
2126 . II	Sagittarii	υ¹	2=19,50	1=19,57	20 19,52	3,935	+ ,001	
2127 . II	Clyp. Sob.		——	3=25,89	20 25,89	3,417	——	
2135 . II	Sagittarii	υ²	——	1=12,05	23 12,05	3,936	− ,001	
2136 . II	———		——	5=13,04	23 13,04	3,666	+ ,009	
1267 . IV	———		2=19,86	1=20,00	23 19,91	3,933	+ ,004	This observation was omitted in the Catalogue.
2137 . II	Clyp. Sob.	s¹	——	3=21,57	23 21,57	3,424	+ ,004	
2140 . II	Sagittarii		——	2=33,79	23 33,79	3,512	+ ,007	
2138 . II	Pavonis	ζ	——	2=49,46	23 49,46	7,054	——	Differs −2,65s. from A. S. C.
2141 . II	24 Sagittarii		1=52,54	1=52,47	23 52,50	3,666	,000	——— +2,19s ——— Paramatta Obs.
2142 . II	Clyp. Sob.	s²	——	3=16,96	24 16,96	3,423	+ ,011	
2324 . III	Sagittarii		1=41,61	1=41,35	24 41,48	3,931	− ,003	
2328 . III	Lyræ		1=21,66	1=22,40	27 22,15	2,005	+ ,009	The observation in 1835 is in complete, and marked "*faint*".—I have given it half the credit of the other.
2151 . II	Clyp. Sob.		——	2=20,28	28 20,28	3,483	+ ,006	
2152 . II	Sagittarii		——	2=32,62	28 32,62	3,649	+ ,015	
2153 . II	Herculis		——	2=40,20	28 40,20	2,492	− ,008	
2154 . II	Sagittarii		——	3= 6,74	29 6,74	3,582	+ ,002	

* See errata.

Digitized by Google

Reference. No.	Vol.	Names.		Mean A. R. Jan. 1, 1836.—from former obs.	present obs.	Concluded Mean A. R. Jan. 1, 1836.	Annual Precesn.	P. M.	Remarks.
				s.	s.	h. m. s.	s.	s.	
2332 of	III	37 Lyræ		*2=51,63	2=52,52	18 29 52,07	+2,004	+ ,002	
2340 .	III	14 Cor. Aust.		3=33,46	1=33,38	32 33,44	4,172	— ,021	
1281 .	IV	—— ——		1=35,51	1=35,82	32 35,66	4,172	— ,019	This observation was omitted in the Catalogue.
2347 .	III	Lyræ		——	3=35,81	36 35,81	2,095	+ ,005	
2183 .	II	Sagittarii		2= 5,08	2= 5,07	46 5,04	3,634	+ ,013	
2366 .	III	Sagittarii		——	1=38,75	46 38,75	3,632	+ ,015	
2193 .	II	64 Serpentis		1= 2,12	2= 1,83	49 1,92	3,015	+ ,011	
2389 .	III	114 Lyræ		3=48,19	3=47,85	56 48,02	1,693	+ ,014	
1350 .	IV	Aquilæ		3=58,76	2=58,71	19 6 58,74	2,864	+ ,026	These were omitted in the Catalogue.
1354 .	IV	——		2=16,54	1=16,66	8 16,58	2,864	+ ,009	Do. Do. Do.
2236 .	II	Sagittarii		——	1=38,92	9 38,92	3,430	— ,004	
2244 .	II	——	β²	——	1=21,36	11 21,36	4,346	— ,012	
2246 .	II	——		——	1= 0,08	12 0,08	3,519	— ,003	
2247 .	II	28 Aquilæ	A	——	1= 0,23	12 0,22	2,796	— ,001	
2249 .	II	27 ——	d	——	1= 8,08	12 8,01	3,095	+ ,009	
2264 .	II	Sagittarii		1= 6,07	2= 6,03	17 6,04	3,403	+ ,008	
2269 .	II	4 Vulpeculæ		——	2=17,05	18 17,05	2,623	+ ,014	
2271 .	II	3 Cygni		——	2=38,66	18 38,66	2,491	— ,009	
2272 .	II	60 Draconis	τ	——	2=39,41	18 39,41	—1,057	+ ,036	N. P. D. 16°,54′.
1387 .	IV	Anseris		2=18,18	1=18,47	19 18,28	+2,621	+ .005	This observation was omitted in the Catalogue.
2427 .	III	19 Cygni		3= 5,81	3= 5,82	20 5,81	1,571	+ ,012	
2276 .	II	Sagittarii		5= 9,76	2= 9,72	21 9,75	3,566	+ ,005	
2446 .	III	39 Cygni		3=45,26	2=45,29	27 45,27	1,272	+ ,007	
2447 .	III	Sagittarii		——	2=50,20	27 50,20	3,298	+ ,007	
1430 .	IV	Sagittæ		3= 5,55	1= 5,35	34 5,50	2,674	+ ,009	} These observations were omitted in the Catalogue.
1436 .	IV	Sagittæ		2=18,86	1=18,75	35 18,83	2,670	+ ,016	
1437 .	IV	——		4=28,18	2=28,23	35 28,20	2,680	+ ,004	
2464 .	III	73 Cygni		2=27,59	2=27,27	37 27,43	1,610	— ,001	
2465 .	III	Aquilæ	υ	2=41,29	1=41,43	37 41,33	2,914	+ ,017	
2468 .	III	Cygni		3=38,64	2=38,60	39 38,63	2,197	+ ,005	
2478 .	III	Aquilæ		3=23,05	1=22,76	44 22,98	2,830	— ,014	
2481 .	III	25 Sagittæ		3= 3,02	1= 2,95	45 3,00	2,673	+ ,002	
2482 .	III	187 Aquilæ		3=44,52	2=44,85	45 44,65	3,250	— ,017	
1475 .	IV	——		3= 5,91	2= 5,80	54 5,87	2,835	+ ,004	These observations were omitted in the Catalogue.
2505 .	III	18 Cephei		——	2=38,96	55 38,96	1,242	+ ,022	
2363 .	II	63 Aquilæ	τ	——	3= 7,66	56 7,66	2,929	+ ,009	
2365 .	II	15 Sagittæ	z	5=44,34	2=44,13	56 44,28	2,686	+ ,002	
2510 .	III	Draconis	e¹	——	2=43,32	59 43,32	0,657	+ ,011	
2370 .	II	17 Vulpeculæ	i	5=50,36	1=50,56	59 50,39	2,573	— ,008	The result in Vol. II. belongs to Piazzi No. 12.
2524 .	III	Antinous		2=	1=52,27	20 2 52,27	3,080	+ ,015	

* It has long been a subject of great perplexity to me—that the discordances to be met with among observations, should occasionally so far exceed the probable, and even what one could suppose—the possible limits of error; this complaint however, is not altogether new;—for, so far back as 1825, Mr. Pond remarked that the results of observations of the Star *Regulus* derived from the two Mural Circles at Greenwich, differed, to an amount exceeding that which could reasonably be attributed either to the observers, or to the Instruments; be this as it may—the discordance which here occurs is so singularly large, that it merits particular investigation;—according I have examined and re-examined again and again every figure of the computation, in the hope of finding an error, or some circumstance, whereby the credit of the observer and instrument might be vindicated; the only circumstances which affect the two observations in the one case from those in the other, are, differerent observers,—and, that in the former observatoins a *Lyræ* was observed in conjunction with this star (it being in the field with it):—this latter circumstance may appear trifling; but I have noticed, that any disturbance of the observer's attention, such as being hurried to observe a second star, invariably causes him to note the time *too soon*.

Digitized by Google

Reference. No.	Vol.	Names.		Mean A. R. Jan. 1, 1836—from former obs.	present obs.	Concluded Mean A. R. Jan. 1, 1836.	Annual Precesn.	P. M.	Remarks.
				s.	s	h. m. s.	s	s.	
2379 of	II	19 Vulpeculæ		3=57,28	2=56,87	20 4 57,12	+2,503	+ ,027	These have been omitted in the Catalogue.
2534 .	III	Cygni	b^3	1=23,68	1=23,68	8 23,68	2,236	+ ,015	
1530 .	IV	———		1=31,77	3=31,69	8 31,71	2,239	+ ,003	These were omitted in the Catalogue.
2390 .	II	18 Sagittæ		5= 7,56	2= 7,49	3 7,54	2,632	+ ,013	
1540 .	IV	Antinoi		3=23,88	2=23,97	12 23,91	3,202	+ ,011	
1542 .	IV	Capricorni		2= 5,80	1= 6,02	13 5,87	3,395	+ ,015	
2546 .	III	Cephei		——	2=31,76	13 31,76	−1,905	+ ,097	N. P. D. 12°,40′ ∴ P. M. = 0″,30 of arc.
2567 .	III	Cygni		——	5=50,70	23 50,70	+1,836	+ ,007	
2575 .	III	Ursæ Min.	λ	——	1=54,00	24 54,00	−49,116	+ ,094	N. P. D. 1°,11′ ∴ P. M. = 0″,03 of arc.
2420 .	II	46 Cygni	ω^3	1=15,52	2=15,26	26 15,35	+1,848	+ ,012	
1598 .	IV	Aquarii		2=21,34	1=21,47	26 21,38	3,248	— ,004	This observation was omitted in the Catalogue.
2576 .	III	53 Capricorni		3=31,30	1=31,20	28 31,28	3,407	+ ,019	
2431 .	II	27 Vulpeculæ	p	——	2= 5,11	30 5,11	2,554	+ ,011	
2434 .	II	8 Delphini	θ	6=59,65	1=59,55	30 59,63	2,829	+ ,011	
2433 .	II	1 Aquarii		——	2= 0,41	31 0,41	3,070	+ ,009	
2592 .	III	Delphini		1=26,69	2=26,44	34 26,52	2,750	+, 016	*Not now visible!*
1642 .	IV	Aquarii		——	——	36 ——	——	——	This observation was omitted in the Catalogue.
2603 .	III	61 Cephei		——	1=37,71	38 37,71	−3,109	+ ,023	The A. R. observed in 1833 pertains to another star—the place in the A. S. C. must be wrong, or the star has disappeared.
1652 .	IV	Vulpeculæ		2=43,78	1=43,91	40 43,82	+2,579	,000	
2460 .	II	Capricorni		3=	——	41 ——	3,595	——	
2478 .	II	32 Vulpeculæ	q	6=34,44	2=34,40	46 34,43	2,552	+ ,012	
2622 .	III	———		——	1= 1,87	48 1,87	2,552	+ ,009	
2488 .	II	33 ———	x	2=56,60	4=56,86	50 56,77	2,678	+ ,016	
2629 .	III	———		——	1=43,60	50 43,60	2,678	+ ,009	
2638 .	III	Microscopii		——	1= 8,37	55 8,37	3,693	+ ,028	
2641 .	III	Microscopii	η	2=43,87	2=43,89	55 43,88	3,934	— ,011	
2643 .	III	Vulpeculæ		2=13,91	2=13,87	56 13,89	2,653	+ ,002	
2646 .	III	Microscopii		3=10,77	1=10,44	59 10,69	3,596	+ ,029	
2649 .	III	Vulpeculæ		3=43,65	1=43,96	21 0 43,72	2,668	+ ,005	The blank which precedes this in Vol. III. must be cancelled.
2664 .	III	Aquarii		——	1=11,50	6 11,59	3,193	+ ,013	
2517 .	II	8 Equulei	a	6=37,44	1=37,00	7 37,38	2,995	+ ,006	
2688 .	III	Cephei		——	1= 7,89	19 7,89	1,728	+ ,006	
1807 .	IV	Aquarii		3=34,66	1=34,86	20 34,71	3,262	+ ,015	This observation was omitted in the Catalogue.
2701 .	III	111 Cephei		2=35,22	1=35,74	24 35,39	1,175	+ ,020	
2554 .	II	Capricorni		5=19,66	2=19,61	25 19,65	3,280	+ ,016	
2706 .	III	Aquarii		——	1= 1,96	27 1,96	3,065	+ ,008	
2726 .	III	377 Cygni		——	4=47,53	35 47,53	2,401	+ ,014	
1854 .	IV	———		2=57,61	5=57,76	35 57,72	2,402	+ ,011	These observations were omitted in the Catalogue.
2727 .	III	Aquarii		——	2=10,26	36 10,26	3,203	+ ,015	
2583 .	II	10 Pegasi	κ	4=13,34	1=13,15	37 13,30	2,706	+ ,004	
2733 .	III	Pegasi		2=48,93	2=48,65	38 48,79	2,753	+ ,005	
2735 .	III	64 ———		——	2=14,15	41 14,15	2,519	+ ,008	
2746 .	III	Gruis	v^2	3= 7,40	4= 7,27	47 7,33	3,649	+ ,028	
1902 .	IV	Aquarii		3= 6,59	1= 6,68	54 6,61	3,088	+ ,013	This observation was omitted in the Catalogue.
2771 .	III	174 Cephei		1= 5,41	2= 5,89	22 0 5,73	1,840	+ ,015	See Piazzi's Note to these Stars.
2772 .	III	175 Cephei		——	1= 1,78	0 1,78	1,812	+ ,014	
2774 .	III	———		1= 3,70	2= 3,65	3 3,66	2,004	+ ,010	
2775 .	III	———		2=25,71	1=25,20	3 25,54	2,025	+ ,024	
2640 .	II	39 Aquarii		5=34,80	3=34,83	3 34,81	3,243	+ ,005	
2641 .	II	Pegasi		——	1=56,37	3 56,37	2,891	+ ,013	

Digitized by Google

Reference. No. Vol.	Names.	Mean A. R. Jan. 1, 1836.—from former obs.	present obs.	Concluded Mean A. R. Jan. 1, 1836.	Annual Precesn.	P. M.	REMARKS.
		s	s.	h. m. s.	s.	s.	
2648 of II	Gruis μ^1	4=42,66	1=42,42	22 3 42,61	+ 3,649	+ ,023	
2658 . II	1 Lacertæ α	5=49,86	1=49,75	8 49,84	2,599	+ ,019	
2796 . III	162 Aquarii	2=11,60	2=11,62	13 11,61	3,141	+ ,003	
2687 . II	37 Pegasi H^3	5=40,66	1=40,85	21 40,69	3,033	+ ,006	
2688 . II	57 Aquarii σ	8=57,83	1=57,99	21 57,85	3,182	+ ,003	
2689 . II	17 Pis. Aust. β	6= 9,95	1=10,29	22 10,00	3,431	+ ,011	
2818 . III	42 Lacertæ	——	3=20,57	23 20,57	2,379	+ ,008	
2821 . III	221 Cephei	——	2=20,54	25 20,54	— 3,465	+ ,176	N. P. D. 4°,44′ ∴ P. M. = 0″,21 of arc.
2823 . III	———	——	2=52,99	25 52,99	— 3,596	+ ,106	N. P. D. 4°,37′ ∴ P. M. = 0″,13 of arc.
2825 . III	Piscis Aust. σ	2=20,72	2=20,82	27 20,77	+ 3,402	,000	
2833 . III	7 Androm.	1=34,91	2=35,07	28 34,97	2,651	+ ,004	
2844 . III	Pegasi P^2	2=51,39	1=51,78	33 51,52	2,949	+ ,001	
2711 . II	43 ——— o	——	2= 3,92	34 3,92	2,802	+ ,010	
2713 . II	Aquarii	6=27,79	1=27,92	34 27,81	3,147	+ ,022	
2852 . III	———	3=22,85	2=22,89	39 22,87	3,108	+ ,003	
2856 . III	237 Aquarii	1=13,24	1=13,32	42 13,28	3,131	+ ,001	
2885 . III	———	——	4=28,20	59 28,20	3,266	+ ,018	
2895 . III	303 Pegasi	1=46,32	4=46,22	23 1 46,24	3,015	+ ,010	
2907 . III	——— N	2=28,49	1=28,14	9 28,38	2,977	+ ,006	
2908 . III	Pis. Aust.	3=41,20	1=41,61	9 41,28	3,231	+ ,045	
2909 . III	Pis. Aust.	1=15,61	1=15,59	10 15,60	3,229	+ ,008	
2784 . II	7 Piscium b	5=59,31	1=59,67	11 59,39	3,046	+ ,014	
2787 . II	62 Pegasi τ	5=31,80	2=31,56	12 31,73	2,962	+ ,012	
2814 . II	Aquarii	5= 4,54	1= 4,32	27 4,50	3,097	+ ,009	The star observed here is of the 9th mag, agreeing with the small star mentioned by Piazzi; has then A^2 disappeared?
2828 . II	104 ——— A^2	——	4=16,12	33 16,12	3,122	+ ,048	
2959 . III	Androm.	3=27,44	1=27,13	36 27,36	2,930	+ ,001	
2966 . III	306 Cephei	3=53,51	1=53,55	40 53,52	2,866	+ ,026	
2056 . IV	Pegasi	4=34,02	1=34,07	45 34,03	3,052	— ,014	
2868 . II	Cassiopeæ	——	4=17,67	53 17,67	2,996	——	

In bringing up the results of Vol. II. and III. to 1836, as well as in reducing those of 1836—37, to the same epoch, the Annual Precession only has generally been employed; but in a few cases (where the P. M. was large) this too has roughly been applied; thus, to the results brought up with Precession from Vol. II, four times the amount of proper motion has been added: and to those from Vol. III. and from observation in 1836—37 one years proper motion only has been applied.

Note to the Second Eddition—The above remarks relative to the differences from the Paramatta observations, were made before I had examined the Catalogue, and consequently before I had become acquainted with the systematic errors which there occur.—

Digitized by Google

SUPPLEMENTARY CATALOGUE OF THE DECLINATION OF THE FIXED STARS.

Reference. No.	Reference. Vol.	A. R.	Names.		Mean Decn. Jan. 1, 1836.—from former obs	Mean Decn. Jan. 1, 1836.—from present obs.	Concluded Mean Decn. Jan. 1, 1836.	Annual Precesn.	Annual P. M.	REMARKS.
		H. M.			″	″	° ′ ″	″	″	
1 of	III	0 1	24 Ceti		——	4=37,01	— 6 9 37,01	+20,038	—0,06	
2 .	III	4	61 Andromedæ		5=43,30	2=41,07	+40 7 42,66	20,038	— ,08	
16 .	II	6	35 Piscium	B	5=34,70	1=35,80	+ 7 54 34,88	20,035	— ,10	
21 .	II	11	Tucanæ	ζ	10=23,19*	2=19,76	—65 50 22,62	20,019	——	Differs 2′ from A. S. C.
19 .	III	21	117 Piscium		3=47,35	1=51,00	+15 7 48,26	19,947	— ,13	
40 .	II	23	Phœnicis	λ^1	10=42,26	1=41,67	—49 42 42,21	19,940	——	Differs nearly 1′ from A. S. C.
44 .	II	23	Tucanæ	β^1	——	1=42,32	—63 51 42,32	19,935	——	
45 .	II	23	———	β^2	——	1= 7,97	—63 52 7,97	19,935	——	
22 .	III	26	App. Sculp.	ξ	4= 3,75	1= 6,90	—35 53 4,38	19,916	— ,51	
27 .	III	28	117 Andromedæ		4=45,11	1=45,67	+23 6 45,22	19,887	— ,01	
59 .	II	30	31 Andromedæ	δ	11=41,41	4=40,29	+29 57 41,12	19,968	— ,30	This large P. M. is in accordance with the diff. from A. S. C.
79 .	II	39	Piscium		5= 5,88	6= 7,53	+ 4 26 6,77	19,747	—1,25	
58 .	III	50	322 Cephei		4= 4,18	3= 4,31	+86 16 4,24	19,554	+0,12	In Vol. III. the result was accidentally omitted.
108 .	II	56	74 Piscium	ψ^1	5=36,51	2=36,79	+20 35 36,59	19,435	—0,03	
67 .	III	57	Cassiopeæ	μ	4=44,89	2=44,80	+54 6 44,86	19,418	—1,55	Piazzi states P. M. = — 0″,65.
113 .	II	58	79 Piscium	ψ^2	4=52,92	2=52,30	+19 51 52,71	19,386	—0,19	A wrong star observed in 1832 Pi- gives P. M. —″,02
124 .	II	1 1	32 Ceti		5=——	3=51,76	— 9 46 51,76	19,321	— ,29	
132 .	II	4	86 Piscium	ζ^1	6=23,35	1=23,65	+ 6 42 23,39	19,245	— ,05	
135 .	II	5	88 ———		5=34,73	1=37,11	+ 6 7 35,13	19,221	— ,04	
140 .	IV	9	Cassiopeæ		2=37,10	1=36,81	+57 20 37,03	19,119	+ ,02	
97 .	III	10	Cassiopeæ	ϕ	4= 2,92	2= 3,60	+57 22 3,15	19,114	+ ,06	
158 .	II	19	Piscium		5=34,71	1=34,68	+ 7 6 34,70	18,850	+ ,03	
162 .	II	21	98 ———	μ	10=43,11	5=40,83	+ 5 17 42,35	18,795	— ,17	
167 .	II	24	Phœnicis	δ	8=41,62	4=39,77	—49 55 41,00	18,706	——	
178 .	II	28	102 Piscium	π	5= 4,99	4= 3,15	+11 18 4,17	18,580	+ ,09	
138 .	III	32	137 Cassiopeæ		4=11,46	3=10,98	+59 43 11,25	18,434	+ ,17	These 9 observation had been overlooked.
183 .	IV	44	5 Arietis	γ^1	9=22,10	4=20,92	+18 29 21,74	18,001	— ,14	
172 .	III	50	153 Cassiopeæ		5=36,15	2=35,08	+63 35 35,84	17,730	+ ,04	
217 .	II	52	59 Ceti	υ^2	7=30,10	3=30,07	—21 52 30,09	17,697	— ,04	Differs 11″ from G. C.
220 .	II	53	57 Andromedæ	γ	5=22,31	2=21,82	+41 32 22,17	17,635	,00	
181 .	III	54	37 Arietis		4=26,66	1=23,05	+25 8 25,76	17,587	— ,17	
196 .	III	2 2	52 ———		4=——*	4=32,93	+25 9 32,93	17,267	— ,05	N. P. D. 5° wrong in Vol. II.
214 .	III	6	Persei	χ	4= 6,55	3= 5,23	+56 45 5,98	17,050	— ,05	
219 .	III	9	262 Eridani		——	1=27,09	+48 11 27,09	16,954	+ ,12	
243 .	II	11	68 Ceti	o	——	4=47,26	— 3 43 47,26	16,868	— ,69	
218 .	IV	13	Ceti		4=47,68	2=45,70	— 3 42 47,02	16,732	— ,03	
227 .	IV	19	Trianguli		2=54,30	7=52,93	+28 56 54,00	16,452	— ,12	
247 .	III	23	43 ———		4=49,06	4=49,20	+33 48 49,13	16,270	— ,05	
251 .	III	25	46 ———		4= 2,00	3=59,23	+33 58 0,81	16,108	+ ,15	
230 .	IV	25	———		4=13,33	3= 9,93	+34 0 11,87	16,140	— ,12	
268 .	II	27	Ceti		5= 1,42	3= 1,39	+ 6 6 1,40	16,075	+1,45	[(45″) from A. S. C. This P. M. accounts for the diff.
270 .	II	27	30 Arietis		10=45,22	3=47,72	+23 55 47,72	16,051	—0,05	I have retained the result of 30 Arietis for 1836, in order to shew the difference of Declination.
271 .	II	27	———		——	3=46,37	+23 55 46,37	16,048	— ,05	
253 .	III	27	Ceti	d^1	4=43,01	1=43,00	— 4 15 43,01	16,043	— ,56	
234 .	IV	29	Persei		2=51,86	2=54,02	+48 50 52,94	15,926	+ ,06	

* See errata.

Digitized by Google

Reference. No.	Vol.	A. R.	Names.		Mean Decn. Jan. 1, 1836.—from former obs.	present obs.	Concluded Mean Decn. Jan. 1, 1836.	Annual Precesn.	P. M.	REMARKS.
		H. M.			″	″	° ′ ″	″	″	
280	of II	2 32	83 Ceti	ε	9=16,22	4=18,55	−12 34 16,99	+15,829	− ,20	
295	. II	36	Hydri	ε	——	——	−68 58 ——	15,528	——	*Not now visible !*
242	. IV	37	Persei		2=35,28	1=33,41	+48 29 34,66	15,470	− ,10	
252	. IV	49	——		2=40,02	3=36,87	+51 22 38,23	14,805	+ ,05	
324	. II	51	Horologii	β	——	——	−63 31 ——	14,701	——	*Not now visible !*
380	. II	52	8 Eridani	ρ¹	10=47,28	4=46,64	− 8 18 47,10	14,610	− ,09	The observations in 1833 refer to another star;—from a recent examination *this star is not now visible !*
337	. II	55	Fornacis		2=23,65	——	−23 37 ——	14,483	——	
261	. IV	3 3	Camelop.		2=26,76	2=26,34	+65 2 26,55	13,948	− ,08	
303	. III	5	Messoris	A²	4=34,10	3=33,84	+65 2 33,99	13,801	− ,11	
321	. III	12	142 Persei		4 ——	1= 9,26	+48 37 9,26	13,418	− ,05	A wrong star observed in 1835.
368	. II	13	Eridani	e	9= 0,98	3=59,96	−43 42 0,72	13,346	+ ,87	Piazzi states the P. M. to be +0″,83
341	. III	27	Persei		4=13,87	4=15,40	+30 34 14,63	12,368	− ,05	
389	. II	28	20 Eridani	F	——	6=49,28	−18 0 49,28	12,302	− ,06	
426	. II	42	——		5=33,10	4=35,75	−38 7 34,28	11,329	− ,18	
429	. II	43	Tauri		7=59,94	2= 1,51	+16 50 0,29	11,248	,00	
384	. III	44	210 Eridani		4= 6,41	1= 6,21	− 5 33 6,37	11,169	− ,06	
439	. II	49	Hydri	γ	1=56,93	3=35,44	−71 44 35,44	10,772	——	The observation in 1833 refers to another star.
450	. II	56	Reticuli	δ	10=53,80	4=52,04	−61 51 53,30	10,318	——	
483	. II	4 11	Doradus	γ	10=13,10	3=10,25	−51 54 12,44	9,133	——	
482	. II	11	41 Eridani	X	10=10,41	3= 9,57	−34 12 10,28	9,011	+ ,05	
436	. III	14	220 Persei		4=26,59	4=26,61	+33 27 26,60	8,922	——	A wrong star.
506	. II	17	43 Eridani		10= 8,03	3= 8,14	−34 24 8,05	8,656	− ,02	
515	. II	21	80 Tauri		——	4=20,30	+15 16 20,30	8,434	− ,17	
448	. III	22	——	m	4 ——	3=43,31	+42 40 43,31	8,307	+ ,14	
462	. III	27	Eridani	υ¹	4=12,59	3=11,09	−30 6 12,32	7,896	− ,29	
465	. III	28	Scep. Brand.		4=54,01	2=32,06	− 8 47 53,36	7,740	+ ,04	
332	. IV	28	Eridani		4= 6,83	2= 6,43	− 8 38 6,70	7,858	− ,07	
543	. II	32	Tauri	τ	14= 9,58	2= 9,30	+22 38 9,55	7,504	− ,01	
578	. II	50	——		1= 9,00	3= 6,90	+14 17 7,42	6,081	− ,07	
515	. III	51	Eridani		——	3=27,21	−10 36 27,21	5,877	− ,08	
523	. III	54	Aurigæ	e	——	3=14,11	+62 15 14,11	5,659	+ ,07	
610	. II	5 3	Doradus	ζ	7=54,95	3=51,41	−57 41 53,89	4,965	——	
612	. II	4	14 Aurigæ	a	——	3=21,01	+32 29 21,01	4,819	+ ,18	
554	. III	10	2 Columbæ		4=57,52	3=55,70	−35 6 56,74	4,338	− ,10	This P. M. is in accordance with the diff. (20″+) from A. S. C.
630	. II	11	——	o	10=40,32	3=39,40	−35 3 40,11	4,223	− ,58	
667	. II	24	120 Tauri		——	3=59,60	+18 24 59,60	3,173	,00	
672	. II	25	Columbæ	ε	5=43,89	4=45,76	−35 35 44,72	3,034	− ,17	
590	. III	26	Orionis		——	4=23,99	− 4 55 23,99	2,922	− ,14	
593	. III	27	——	c²	——	3=12,46	− 4 58 12,46	2,813	− ,08	
685	. II	28	40 ——	φ²	8=42,06	3=44,39	+ 9 11 42,69	2,827	− ,30	
693	. II	31	49 Orionis	d	9=36,44	4=39,04	− 7 18 37,24	2,558	− ,11	
609	. III	33	393 Tauri		3=37,51	2=39,05	+18 53 38,13	2,315	− ,03	
699	. II	34	Columbæ	a	43=55,88	4=56,99	−34 9 56,43	2,313	− ,01	A wrong star observed in 1832.
721	. II	42	Tauri		5 ——	4=35,04	+13 59 35,04	1,647	+ ,02	
732	. II	45	Columbæ	β	9= 6,24	4= 5,05	−35 50 5,87	1,314	+ ,25	
735	. II	47	34 Aurigæ	β	11=13,75	3=14,26	+44 55 13,86	1,131	− ,15	
658	. III	51	Camelop.	n	——	3= 4,58	+51 34 4,58	0,723	+ ,03	
746	. II	52	Columbæ	γ	10=22,96	4=21,80	−35 18 22,63	0,742	− ,11	
757	. II	57	67 Orionis	ν	27=48,00	3=48,33	+12 46 48,03	0,187	− ,23	
674	. III	59	191 Aurigæ		3= 5,66	2= 4,78	+48 44 5,31	0,058	,00	

Digitized by Google

Reference. No.	Vol.	A. R.	Names.		Mean Decn. Jan. 1, 1836—from former obs.	present obs.	Concluded Mean Decn. Jan. 1, 1836.	Annual Preces-sion.	P. M.	REMARKS.
		H. M.			″	″	° ′ ″	″	″	
684	of III	6 1	Columbæ		——	3=52.68	−37 10 52,68	−0,152	+ ,03	
700	. III	8	24 Monocer.		——	3=37,55	+ 5 8 37,55	0,770	+ ,04	
703	. III	10	25 ———		——	3=12,12	−10 40 12,12	0,868	— ,05	
787	. II	11	Columbæ	κ	10=29,52	4=29,49	−35 5 29.51	0,914	+ ,12	
707	. III	11	Lyncis		3=11,69	1=11,41	+58 30 11,62	1,018	— ,10	
791	. II	14	1 Canis Maj.	ζ	10=48,09	3=46,00	−29 59 48,57	−1,205	— ,09	
793	. II	15	Monocer.		5=26,30	2=26.27	+ 3 50 26.29	1,254	— ,08	
794	. II	15	8 ———	b	5= 7,32	4= 8,50	+ 4 42 7.84	1,290	— ,69	
799	. II	18	15 Geminor.		5=58,85	4=59,27	+20 52 59,03	1,541	— ,03	
726	. III	18	122 Camelop.		4=12,63	3= 9,76	+79 43 11,26	1,582	— ,32	
728	. III	19	11 Navis		4=32,53	2=34.22	−36 37 33,10	1,620	,00	
747	. III	23	17 Lyncis		——	3=51,44	+61 36 51.44	2,083	+ 1,25	
770	. III	30	Canis Maj.	ν¹	4=46,61	2=44,58	−18 31 45,93	2.558	+ 0,19	
780	. III	32	23 Lyncis	seq.	4=43,36	2=40,28	+59 35 42,33	2,795	— ,15	
790	. III	35	Canis Maj.		——	3=49,88	−27 28 49,88	3,078	+ ,10	
490	. IV	39	Canis Maj.		3=25.96	2=29,40	−20 36 27,33	3,400	+ ,02	
807	. III	43	29 Lyncis		4=38,73	3=38,25	+57 45 38,52	3,778	00	
809	. III	45	Canis Maj.	h	4= 9,51	1= 9.25	−31 31 9,46	3,853	+ ,09	
854	. II	46	14 —— ——	θ	——	3=18.17	−11 50 18.17	4,021	00	
814	. III	47	Lyncis		1=30,43	1=32,97	+57 48 31,70	4,116	+ ,05	[See Piazzi's note.
820	. III	50	112 Canis Maj.		3=——	3=14,44	−16 53 14,44	4.363	— ,05	A wrong star observed in 1835;—
871	. II	52	Geminor.		5=14,88	1=13.50	+29 36 14,65	4,567	— ,81	Differs 26″,59 from A. S. C.
831	. III	55	Lyncis		——	4=31,58	+60 59 31.58	4,798	+ ,06	
511	. IV	7 0	Navis		1=——	3= 6.65	−43 23 6,65	5,109	+ ,46	The result in the Catalogue is erro-
847	. III	2	123 Geminor.		4=42,78	3=44,50	+15 35 43,52	5,367	— ,10	neous.
528	. IV	9	19 Lyncis		1=58,80	2= 1,33	+55 34 0,48	6,010	— ,06	
891	. III	14	144 Geminor.		——	3=51,43	+27 56 51,43	6,410	+ ,05	
894	. III	16	Navis		4= 8,65	4= 8,14	−31 44 8,40	6.569	+ ,05	
917	. III	26	Canis Min.		——	3=37,95	+ 3 41 37.95	7.384	— ,02	
943	. III	35	186 Navis		8=13,52	3=12,94	−38 9 13,36	8,126	— ,04	
944	. III	36	Navis		——	3=44,94	−38 8 44,94	8,179	— ,02	
947	. III	38	———	T	3=38,28	3=39,90	−44 45 39,09	8,312	— ,59	
957	. III	42	217 Navis		——	3=26,93	−24 33 26,93	8,639	— ,38	
989	. II	56	9 Cancri	μ¹	5=51,98	3=52,32	+23 5 52.11	9.734	— ,06	
993	. III	57	Navis		——	3=55,21	−19 18 55,21	9,824	+ ,12	
999	. II	8 2	15 Cancri	ψ³	——	3=27,74	+30 8 27,74	10,216	+ ,11	
1004	. II	5	———		4=51,76	1=51,46	+18 9 51,70	10,356	— ,04	
1009	. II	7	Piscis Vol.	ε	——	3= 3,87	−68 8 3,87	10,572	——	
1013	. III	7	Navis		——	3=54,98	−31 39 54,98	10,537	+ ,09	
1024	. II	16	23 Cancri	φ²	——	3=53.14	+27 37 53,14	11,243	+ ,02	
1032	. II	19	Argus	ε	——	3=57,65	−58 58 57,65	11,426	——	{ A great number of stars at this spot
1049	. II	31	Cancri		5=——	2=45,33	+20 6 45,33	12,206	— ,16	has created much confusion;—
1055	. II	31	———		5= 7,75	3= 6,91	+20 7 7,51	12.249	— ,11	these must be re-examined. }
1061	. II	33	Pixid Naut.	β	11=51,15	3=51,47	−34 43 51,23	12,439	— ,10	Differs above 23″ from G. C.
1066	. III	37	Monocer.	r	4=51,08	3=48,86	− 6 38 50,13	12,600	+ ,02	
1080	. II	41	Cancri		5=30,19	2=29,80	+18 36 30,09	12,952	00	
646	. IV	9 0	Pixid Naut.		3=47,03	3=47,68	−25 10 47,36	14,208	— ,13	
1124	. II	7	Argus	i	8=41,23	4=43,02	−61 38 41,68	14,623	——	
1121	. III	9	Navis	k¹	4=26,28	3=25,32	−36 55 25,87	14,692	— ,02	
1136	. III	15	Hydræ		4=49,10	4=49,44	+ 4 11 49,27	15,062	— ,11	

Digitized by Google

Reference. No.	Vol.	A.R.	Names.		Mean Decn. Jan. 1, 1836.—from former obs.	present obs.	Concluded Mean Decn. Jan. 1, 1836.	Annual Preces-sion.	P. M.	REMARKS.
		H. M.			"	"	° ′ "	"	"	
1151 of	II	9 21	31 Hydræ	r¹	5=21,58	3=19,63	— 2 3 20,85	—15,382	— ,08	
1173 .	III	31	———		——	3=31,23	— 9 58 31,23	16,004	+ ,18	
1179 .	II	39	29 Ursæ Maj.	υ	13=15,46	3=14,30	+59 48 15,24	16,359	— ,25	Differs 5″,6 from G. C.
1191 .	II	46	9 Sextantis		5=52,22	4=50,96	+ 5 42 51,66	16,675	— ,10	
1195 .	II	51	———		——	4=54,27	+ 4 9 54,27	16,946	+ ,10	
1214 .	II	10 2	34 Leonis		5=41,78	3=41,38	+14 9 41,63	17,465	— ,10	
1256 .	III	16	———		1=20,94	3=20,23	+ 9 36 20,41	18,058	— ,21	
1261 .	II	29	37 Leo. Min.	l	13=31,84	3=31,88	+32 49 31,85	18,488	— ,07	I have re-observed these stars merely with a view to determine their *difference* of Declination.*
1274 .	II	36	42 —— ——	n	21=41,51	3=43,18	+31 32 41,72	18,723	+ ,01	
1278 .	II	37	51 Leonis	m²	——	3=12,60	+19 45 12,60	18,750	— ,17	
1279 .	II	37	52 Leonis	k	——	3=28,09	+15 3 28,09	18,755	— ,22	
1288 .	II	42	41 Sextantis	r	5=47,46	3=49,80	— 8 1 48,32	18,886	— ,03	
1289 .	II	43	46 Leo. Min.	o	12=45,53	3=44,65	+35 5 45,35	18,944	— ,40	Differs 5″,4 from G. C.
1329 .	III	55	216 Ursæ Mij.		3=22,48	1=22,94	+39 7 22,60	19,256	— ,04	
1353 .	III	11 7	322 Leonis		4=26,85	3=26,84	+13 30 26,85	19,520	— ,12	
1375 .	III	18	Leonis		——	2=57,46	+13 53 57,46	19,718	+ ,09	
1407 .	III	31	Hyd. & Crat.		1= 8,11	3=10,87	—12 16 10,18	19,887	— ,15	
1416 .	III	34	Hydræ	V	4=15,26	4=17,54	—31 35 16,40	19,912	— ,02	
775 .	IV	34	———		——	3=31,24	—31 34 31,24	19,913	— ,01	
1371 .	II	37	3 Virginis	ν	5=57,62	3=55,17	+ 7 26 56,70	19,943	— ,12	
1437 .	III	46	338 Ursæ Maj.	var.	——	4=57,04	+47 22 57,04	20,010	+ ,05	
1386 .	II	52	8 Virginis	π	16=44,70	4=45,99	+ 7 31 44,96	20,031	— ,04	
1426 .	II	12 17	Crucis	α¹	——	3=42,94	—62 12 42,94	19,987	——	
808 .	IV	19	Virginis		——	3=31,77	+ 5 19 31,77	19,971	,20	A wrong star appears to have been observed in 1832.
1436 .	II	21	18 Comæ Ber.		4=58,17	5=53,95	+25 0 53,95	19,959	— ,27	
1445 .	II	25	20 Virginis		4=10,62	3= 8,18	+11 12 9,57	19,929	+ ,05	
1460 .	II	30	26 ———	χ	——	3=28,88	— 7 5 28,88	19,866	— ,07	Probably an error of 1′ in Piazzi or in this result.
1599 .	III	52	Centauri		——	2=39,72	—22 36 39,72	19,524	—1,93	
1634 .	III	13 8	201 Comæ Ber.		——	2=55,43	+20 40 55,43	19,144	+0,05	Piazzi has assigned the 9th mag. to this star whereas it is now of the 7th.
1751 .	III	59	634 Virginis		——	3=37,75	—18 27 37,75	17,349	— ,01	
1795 .	III	14 18	Bootis		——	5= 2,71	+19 57 2,71	16,482	— ,18	
1664 .	II	34	32 ———		——	4=18,65	+12 22 18,65	15,709	— ,05	
1667 .	II	36	10 Hydræ Con.		——	2=33,56	—24 44 33,56	15,566	— ,22	
1668 .	II	37	Lybræ		——	2=33,63	—20 28 33,63	15,545	— ,16	
1669 .	II	37	5 ———	ρ	——	2=51,19	—14 45 51,19	15,543	— ,09	
1676 .	II	38	13 Hydræ Con.		——	3=15,87	—25 57 15,87	15,463	— ,10	
1680 .	II	41	8 Libræ	α¹	——	4=41,92	—15 18 41,92	15,280	— ,21	
1685 .	II	43	Bootis		——	5=55,00	+29 17 55,00	15,204	,00	
1695 .	II	49	15 Hydræ	z	——	5=37,21	—26 59 37,21	14,859	— ,07	
1696 .	II	49	1 Serpentis		——	4=50,40	+ 1 29 50,40	14,845	— ,13	
1703 .	II	54	Libræ		——	4=20,86	— 7 11 20,86	14,571	— ,07	
1379 .	III	56	33 Ursæ Min.		——	5=20,83	+75 32 20,83	14,410	— ,05	
1898 .	III	15 5	97 Libræ		4=31,59	3=32,28	—17 48 31,89	13,835	+ ,02	
1740 .	II	11	28 ———	υ	——	6=26,04	—17 33 26,04	13.458	— ,15	
1741 .	II	12	29 ———	o¹	——	5= 9,63	—14 57 9,63	13,441	— ,21	
1773 .	II	28	Libræ		——	5=33,38	—27 39 33,38	12,343	— ,02	
1775 .	II	28	16 Serpentis		——	5=48,19	+10 33 48.19	12,317	— ,15	
1776 .	II	28	18 ———	r²	——	5= 2,88	+16 40 2,88	12,294	+ ,01	
1812 .	II	45	3 Scorpii	A²	——	5= 8,51	—24 45 8,51	11,174	— ,24	
1815 .	II	45	4———		——	5=35,10	—25 46 35,10	11,117	— ,13	

* The difference of Declination here found. Jan. 1. 1836. = 1° 16′ 50″,1 from obs. on the same evening.
Do. from the Greenwich Catalogue. ——— = 1° 16′ 55″,3
——— ——— Piazzi's Catalogue. ——— = 1° 16′ 52″,7

Digitized by Google

Reference. No.	Vol.	A. R.	Names.		Mean Decn. Jan. 1, 1836.—from former obs.	present obs.	Concluded Mean Decn. Jan. 1, 1836.	Annual Precesn.	P. M.	REMARKS.
		H M.			″	″	° ′ ″	″	″	
1965 of	III	15 46	Lupi	ξ	3=40,01	2=39,40	—33 28 39,77	—11,014	+ ,05	
1990 .	III	57	———		4=39,58	2=43.00	—38 38 40,72	10,187	— ,25	
1046 .	IV	16 1	Serpentis		4=46,53	1=46,92	+ 5 50 46,61	9,966	— ,07	
1058 .	IV	11	Scorpii		4=55,50	1=57,74	—19 42 55,95	9,167	— ,09	
2072 .	III	34	———		——	5=39,59	—22 48 39,59	7,333	,00	
1090 .	IV	42	Scorpii		——	3=37,89	—41 32 37,89	6,603	— ,11	This star belongs to Vol. III, but was introduced through mistake into Vol. IV.
2097 .	III	42	150 ———		3=58,38	2=61.00	—41 33 59,43	6,614	+ ,10	
1942 .	II	50	Ophiuchi		4= 6,33	2= 4,98	—17 59 5,88	6,040	— ,06	
2127 .	III	56	117 ———		3=37,00	5=37,72	+13 50 37,45	5,502	— ,19	
2142 .	III	17 1	Herculis		——	5=11,26	+27 19 11,26	5,052	+ ,03	
1973 .	II	7	39 Ophiuchi	θ	——	6= 0,57	—24 6 0.57	4,538	— ,06	
1974 .	II	7	———		——	4=59,97	—23 52 59,97	4,531	— ,08	
1980 .	II	11	66 Herculis	ω	——	4=55,38	+11 2 55,38	4,285	— ,12	
1985 .	II	11	53 Serpentis	ν	——	3=22,59	—12 40 22,59	4.229	— ,02	
1991 .	II	15	33 Scorpii		——	2= 7,21	—24 5 7,21	3,934	+ ,02	
1996 .	II	17	73 Herculis		——	2= 6,07	+23 7 6,07	3,739	— ,04	
1997 .	II	18	47 Ophiuchi		——	2=38,93	—12 21 38,93	3,695	— ,17	
1998 .	II	18	———		——	2= 9,66	— 4 56 9,66	3,686	— ,21	
2014 .	II	25	54 ———		——	3=45.74	+13 16 45,74	2,917	— ,07	
2193 .	III	27	245 ———		1= 4,81*	2= 5,17	+13 14 5,05	2,824	—1,78	Piazzi's Declination is probably 1′ too large, in which case P.M.=—0″11
2015 .	II	27	53 Ophiuchi	f	——	3= 8,77	+ 9 42 8,77	2,915	— ,19	
2018 .	II	28	Serpentis		——	2=50,14	—15 27 50,14	2,802	— ,12	
2024 .	II	29	Sagittarii		——	2= 1,02	—32 7 1,02	2,708	+ ,07	
1170 .	IV	30	Ophiuchi		4=46,71	1=46,76	+11 45 46,72	2,651	+ ,03	
2026 .	II	31	79 Herculis		——	2=44,41	+24 24 44,41	2,572	— ,12	
2209 .	III	34	142 Draconis		——	2=48,06	+62 33 48,06	2,286	— ,01	
2033 .	II	34	Ophiuchi		——	1=46,94	—22 6 46,94	2,256	— ,06	
2034 .	II	34	———		——	1= 5,22	+16 2 5,22	2,239	+ ,17	
2214 .	III	35	Draconis		——	1=14,11	+68 13 14,11	2.170	— ,06	
1185 .	IV	35	83 Herculis		3= 4,61	3= 5,50	+24 39 5,06	2,101	— ,18	
2221 .	III	38	Ophiuchi		——	1=10,71	+ 5 46 10.71	1,915	+ ,17	
1191 .	IV	38	———		2=22,99	1=23.14	+25 47 23.04	1,944	— ,04	
2222 .	III	38	———		——	2=37,29	+ 5 50 37,29	1,851	— ,07	
2042 .	II	38	Sagittarii		——	1=17,29	—31 38 17,29	1,909	— ,03	
2226 .	III	41	Ophiuchi		——	1=44,07	+ 5 45 44,07	1,671	— ,11	
2229 .	III	41	Telescopii		3=47,19	3=44,78	—34 44 45,98	1,613	— ,03	
2231 .	III	42	339 Herculis		——	2=47,14	+19 18 47,14	1,590	,00	
2235 .	III	43	290 Ophiuchi		——	2=14,46	—19 4 14,46	1,497	— ,11	
2237 .	III	43	Tauri Pon.		——	1=44,30	+ 5 16 44,30	1.468	— ,14	
2239 .	III	44	297 Ophiuchi		——	1= 8,85	+ 1 21 8,85	1,357	,00	
2248 .	III	46	302 Ophiuchi		——	1=54,01	—18 45 54,01	1,183	— ,01	
2252 ,	III	47	357 Herculis		——	2=52,97	+24 48 52,97	1,136	— ,09	
2254 .	III	48	7 Tauri Pon.		——	1= 5,91	+ 0 42 5,91	1,037	— ,03	
2257 .	III	51	172 Serpentis		——	1=56,00	— 4 47 56,00	0,781	— ,23	
2062 .	II	51	6 Sagittarii		——	1=36,15	—17 8 36,15	0,741	— ,08	
2063 .	II	52	Sagittarii		——	1= 3,50	—22 46 3,50	0,734	— ,02	
2261 .	III	52	19 ———		——	1=41,60	—22 53 41,60	0,630	+ ,02	
2067 .	II	53	7 ———	a	——	2=21,94	—24 16 21,94	0,663	— ,05	
2074 .	II	53	9 ———		——	2=21,34	—24 21 21,34	0,573	— ,02	
2078 .	II	55	———		——	2=55,34	—24 23 55,34	0,460	— ,06	

* See errata.

Digitized by Google

Reference. No.	Vol.	A. R.	Names.			Mean Decn. Jan. 1, 1836.—from former obs.	present obs.	Concluded Mean Decn. Jan. 1, 1836.	Annual Precesn.	P. M.	Remarks.
		H. M.				″	″	° ′ ″	″	″	
2269 of	III	17 56		Ursæ Min.		——	2=33,66	+74 35 33,66	— 0,338	— ,19	Piazzi gives P. M. = —0″,30
2276 .	III	59		Sagittarii		——	3=17,25	—24 0 17,25	0,041	+ ,02	
2278 .	III	18 0	406	Herculis		——	2=51,34	+42 56 51,34	— 0,006	— ,07	
2283 .	III	1		——	i	——	2=42,32	+26 4 42,32	+ 0,117	+ ,30	
2305 .	III	15	444	——		4=——	3= 7,67	+29 47 7,67	1,287	+ ,08	
2118 .	II	15	21	Sagittarii		——	3=20,18	—20 37 20,18	1,330	— ,11	Differs 43″ from A.S.C. and too faint for the star intended—*
2123 .	II	18		Sagittarii		——	1=28,75	—17 47 28,75	1,574	——	
2126 .	II	20		——	ν¹	5=18,49	1=16,11	—33 5 18,10	1,741	— ,09	
2127 .	II	20		Clypei Sob.		——	4=59,30	—14 40 59,30	1,759	——	
2132 .	II	22		Sagittarii		——	3=25,31	—18 30 25,31	1,875	— ,07	
2318 .	III	22		Cor. Aust.	χ	3=59,59	3= 0,19	—38 49 59,89	1,950	+ ,05	
2135 .	II	23		Sagittarii	ν²	——	3=44,45	—33 7 44,45	1,991	— ,02	
2139 .	II	23	61	Serpentis	e	——	3=46,70	— 1 6 46,70	2,024	— ,06	
2140 .	II	23		Sagittarii		——	2=48,73	—18 28 48,73	2,026	— ,02	
2150 .	II	28		——		——	2=31,87	—21 31 31,87	2,419	— ,16	
2151 .	II	28		Clypei Sob.		——	4=45,74	—17 21 45,74	2,441	,00	
2152 .	II	28		Sagittarii		——	3= 9,31	—23 38 9,31	2,457	+ ,02	
2153 .	II	28		Herculis		——	2=22,89	+23 28 22,89	2,480	— ,51	
2157 .	II	32	26	Sagittarii		——	4=39,82	—23 58 39,82	2,745	— ,02	
2202 .	II	54		——	S	——	3=45,03	—31 16 45,03	4,636	— ,07	
2212 .	II	58		Sagittarii		——	3=51,14	—28 52 51,14	4,917	+ ,07	
2215 .	II	58		——		——	3=24,09	—24 54 24,09	5,006	— ,11	
2217 .	II	58	*	——		——	3=24,14	—19 32 24,41	5,042	——	
2248 .	II	19 12	44	——.	ρ¹	——	1=51,52	—18 8 51,52	6,178	+ ,12	This star has been looked for frequently but not observed yet.
2249 .	II	12	27	Aquilæ	d	——	——	— 1 13 ——	6,178		
2250 .	II	12	45	Sagittarii	ρ²	——	1=16,82	—18 36 16,82	6,189	— ,08	
2251 .	II	12	46	——	υ	——	1=21,59	—16 15 21,59	6,192	— ,09	
2261 .	II	16		——	O	——	1=38,77	—30 3 38,77	6,540	— ,17	
2262 .	II	17		——		——	1=20,49	—15 22 20,49	6,567	— ,17	
2263 .	II	17	2	Sagittæ		——	2=31,32	+16 37 31,32	6,585	+ ,11	
2264 .	II	17		Sagittarii		——	2=13,87	—14 52 13,87	6.588	— ,14	
2267 .	II	18	2	Cygni	a	——	1=17,51	+29 18 17.51	6,642	— ,08	
2427 .	III	20	19 ·	——		3= 7,05	3=10,82	+49 57 8,93	6,784	— ,09	
2457 .	III	35		Draconis		2=	2= 1,67	+69 26 1,67	8,057	+ ,38	
2465 .	III	38		Aquilæ	υ	2=18,52	2=17,18	+ 7 13 17,85	8,300	— ,06	
2264 .	III	38	73	Cygni		3=46,04	3=46,52	+50 8 46,28	8,274	— ,28	
2326 .	II	42	51	Aquilæ	D		3=23,97	—11 10 23,97	8,582	— ,08	
2478 .	III	45		——		3=44,13	2=46,30	+11 13 45,00	8,828	— ,27	
2482 .	III	46	187	——		3=50,00	1=51,01	— 8 38 50,25	8,938	+ ,01	
2483 .	III	47		Sagittæ		3=54,53	2=49,91	+19 54 52,68	8,969	— ,16	
2494 .	III	52		Sagittarii	H	3= 9,06	2= 9,39	—38 23 9,19	9,476	— ,08	
2510 .	III	59		Draconis	e¹	——	4=47,85	+64 21 47,85	10,001	+ ,02	
2528 .	III	20 6		——		3=50,69	2=51,68	+63 13 51,09	10,373	,00	These observations were omitted in the Catalogue.
1519 .	IV	6		Aquilæ		——	2=28,54	+15 36 28,54	10,434	+ ,15	
2539 .	III	11		Sagittarii	I¹	——	3=30,89	—42 33 30,89	10,882	— ,18	
2567 .	III	25		Cygni		4=18,14	3=16,44	+48 43 17,41	11,776	— ,02	
2420 .	II	27	46	——	ω²	2=13,46	1=11,70	+48 40 12,87	11,926	+ ,04	
2575 .	III	28		Ursæ Min.	λ	3=——	1=57,35	+88 48 57,35	11,852	+ ,06	
2438 .	II	31	28	Vulpeculæ		——	2=43,59	+23 32 43,59	12,279	+ ,07	
2589 .	III	34		Delphini		3=44,32	1=45,07	+13 13 44,51	12,482	— ,03	

* A star of the 6th Magnitude near this has been observed, Declination —17° 53′ 30″,09.

Digitized by Google

Reference. No.	Vol.	A. R.	Names.		Mean Decn. Jan. 1, 1836.—from former obs.	present obs.	Concluded Mean Decn. Jan. 1, 1836.	Annual Preces-sion.	P. M.	Remarks.
		H. M.			"	"	° ′ "	"	"	
1656	of IV	20 44	Cephei		——	2=43,74	+44 58 43,74	+13,102	+1,23	
2495 .	II	54	2 Equulei	λ	5=25,08	3=24,46	+ 6 32 24,85	13,785	— ,02	
2649 .	III	59	Vulpeculæ		——	1=36,31	+22 55 36,31	14,164	——	
2664 .	III	21 6	Aquarii		——	1=40,14	— 7 45 40,14	14,563	— ,03	
2683 .	III	19	——		4=21,82	2=22,84	—12 47 22,16	15,226	— ,16	
2688 .	III	19	Cephei		——	2=18,87	+57 14 18,87	15,313	+ ,08	
2691 .	III	21	Vulpeculæ	z	4=53,44	1=52,82	+26 53 53,31	15,387	— ,01	
2706 .	III	27	Aquarii		——	1= 3,26	+ 0 15 3,26	15,751	— ,19	
2565 .	II	29	4 Pegasi	T¹	6= 2,89	2= 3,07	+ 5 2 2,98	15,902	— ,14	Differs 9" from A. S. C.
2568 .	II	32	42 Capricorni	d¹	——	3=32,16	—14 46 32,16	16,022	— ,41	Piazzi gives P. M.—0",38.
2757 .	III	54	Piscis Aust.		——	3=31,94	—30 41 31,94	17,090	— ,16	
2775 .	III	22 4	Cephei		2=59,22	1=56,61	+58 2 58,35	17,510	+ ,05	
2774 .	III	4	——		2=29,65	2=28,69	+58 29 29,17	17,496	,00	
2648 .	II	5	Gruis	μ¹	5=35,02	3=31,12	—42 9 33,56	17,586	— ,08	
2678 .	II	17	53 Aquarii	E²	——	4=22,19	—17 34 22,19	18,066	+ ,06	
2689 .	II	22	17 Piscis Aust.	β	5= 1,98	1= 0,27	—33 11 1,70	18,232	— ,02	
2699 .	II	27	61 Aquarii	L	5=13,93	1=12,21	—18 18 13,64	18,402	— ,09	
2825 .	III	27	Piscis Aust.	σ	4=28,83	2=29,80	—32 30 29,15	18,434	+ ,03	
2833 .	III	29	7 Andromedæ		4=15,00	4=14,06	+38 47 14,53	18,475	— ,07	
2850 .	III	37	222 Aquarii		4=14,99	1=15,66	—10 30 15,12	18,741	— ,13	
2352 .	III	40	Aquarii		4=45,87	2=45,06	— 5 4 45,60	18,823	— ,51	
2872 .	III	51	——		4=28,16	2=25,15	—27 1 27,16	19,157	— ,11	
2885 .	III	59	——		——	4=12,52	—29 42 12,52	19,353	+ ,36	
2784 .	II	23 12	7 Piscium	b	5=13,24	2=12,84	+ 4 29 13,08	19,599	+ ,08	

One remark is here necessary with regard to the foregoing Catalogue,—namely, that the precessions in Declination are those copied from the Vols. already printed; and consequently pertain to the epochs for which those tables were constructed, and *not* to the year 1836, to which the places of the stars are reduced: with a view to remedy this defect, as well as to supply an every day want of the practical Astronomer, I have computed the following tables.

Digitized by Google

A Table of the annual variation of the Precession in Right Ascension in time.

arg at top the Declination and at the side the A. R. of the Star.

Declin. *North.*	0°	30°	50°	60°	65°	70°	75°	78°	80°	82°	Declin. *South.*
H. M.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s	H. M.
O 0	,0000	+,0001	+,0003	+,0004	+,0006	+,0008	+,0011	+,0014	+,0017	+,0021	XII 0
30	, 00	, 02	, 04	, 06	, 08	, 11	, 16	, 22	, 28	, 38	30
I 0	, 00	, 02	, 04	, 07	, 10	, 13	, 20	, 29	, 37	, 54	XIII 0
30	, 00	, 02	, 05	, 07	, 11	, 15	, 22	, 34	, 45	, 66	30
II 0	, 00	, 02	, 05	, 07	, 12	, 16	, 25	, 37	, 52	, 76	XIV 0
30	, 00	, 03	, 05	, 08	, 12	, 17	, 27	, 39	, 54	, 80	30
III 0	,0000	+,0003	+,0005	+,0008	+,0012	+,0017	+,0027	+,0040	+,0055	+,0081	XV 0
30	, 00	, 02	, 05	, 08	, 11	, 16	, 26	, 38	, 52	, 78	30
IV 0	, 00	, 02	, 04	, 07	, 10	, 15	, 21	, 33	, 45	, 68	XVI 0
30	, 00	, 01	, 03	, 05	, 08	, 12	, 17	, 26	, 37	. 54	30
V 0	, 00	, 01	, 02	, 03	, 05	, 07	, 12	, 18	, 26	, 38	XVII 0
30	, 00	, 00	, 01	, 01	, 03	, 04	, 07	, 09	, 13	, 20	30
VI 0	,0000	—,0000	—,0000	—,0000	—,0000	—,0000	—,0000	—,0000	—,0000	—,0000	XVIII 0
30	, 00	, 00	, 01	, 02	, 03	, 04	, 07	, 09	, 13	, 20	30
VII 0	, 00	, 01	, 02	, 04	, 05	, 08	, 12	, 18	, 26	, 38	XIX 0
30	, 00	, 02	, 03	, 05	, 07	, 11	, 17	, 26	, 37	, 54	30
VIII 0	, 00	, 02	, 04	, 07	, 09	, 14	, 21	, 33	, 45	, 68	XX 0
30	, 00	, 03	, 05	, 08	, 11	, 16	, 26	, 38	, 52	, 78	30
IX 0	,0000	—,0003	—,0005	—,0008	—,0012	—,0017	—,0027	—,0040	—,0055	—,0081	XXI 0
30	, 00	, 03	, 05	, 01	, 12	, 17	, 27	, 39	, 54	, 80	30
X 0	, 00	, 02	, 04	, 07	, 11	, 17	, 25	, 37	, 52	, 76	XXII 0
30	, 00	, 02	, 04	, 07	, 10	, 15	, 22	, 34	, 45	, 66	30
XI 0	, 00	, 02	, 04	, 06	. 09	, 13	, 20	, 29	, 37	, 54	XXIII 0
30	, 00	, 02	, 03	, 05	, 07	, 10	, 16	, 22	, 28	, 38	30
XII 0	,0000	—,0001	—,0002	—,0003	—,0005	—,0007	—,0011	—,0014	—,0017	—,0021	O 0
30	, 00	—, 01	—, 01	—, 02	—, 03	—, 04	—, 06	—, 06	—, 06	—, 05	30
XIII 0	, 00	—, 00	, 00	, 00	, 00	, 00	, 00	+, 01	+, 04	+, 11	I 0
30	, 00	+, 00	+, 00	+, 01	+, 02	+, 02	+, 03	+, 07	+, 14	+, 26	30
XIV 0	, 00	+, 00	+, 01	+, 02	+, 03	+, 03	+, 06	+, 13	+, 21	+, 38	II 0
30	, 00	+, 00	+, 01	+, 02	+, 03	+, 04	+, 07	+, 16	+, 24	+, 47	30
XV 0	,0000	+,0001	+,0002	+,0003	+,0004	+,0005	+,0009	+,0017	+,0026	+,0050	III 0
30	, 00	, 01	, 02	, 03	, 05	, 06	, 10	, 17	. 27	, 49	30
XVI 0	, 00	, 01	, 02	, 03	, 05	, 07	, 11	, 18	, 28	, 47	IV 0
30	, 00	, 01	, 02	, 03	, 04	, 06	, 10	, 16	, 24	, 39	30
XVII 0	, 00	, 00	, 01	, 02	, 03	, 04	, 07	, 12	, 17	, 28	V 0
30	, 00	, 00	, 01	, 01	, 02	, 02	, 04	, 06	, 09	, 14	30
XVIII 0	,0000	—,0000	—,0000	—,0000	—,0000	—,0000	—,0000	—,0000	—,0000	—,0000	VI 0
30	, 00	, 00	, 01	, 01	, 02	, 02	, 04	, 06	, 09	, 14	30
XIX 0	, 00	, 00	, 01	, 02	, 03	, 04	, 07	, 12	, 17	, 28	VII 0
30	, 00	, 01	, 02	, 03	, 05	, 06	, 10	, 16	, 24	, 39	30
XX 0	, 00	, 01	, 02	, 03	, 05	, 06	, 10	, 18	, 28	, 47	VIII 0
30	, 00	, 01	, 02	, 03	, 05	, 06	, 10	, 17	, 27	, 49	30
XXI 0	,0000	—,0001	—,0002	—,0003	—,0004	—,0005	—,0009	—,0017	—,0026	—,0050	IX 0
30	, 00	, 01	, 02	, 03	, 04	, 05	, 08	, 16	, 24	, 47	30
XXII 0	, 00	, 00	, 01	, 02	, 03	, 04	, 06	, 13	, 21	, 38	X 0
30	, 00	, 00	—, 01	, 01	, 02	, 02	, 04	, 07	, 14	, 26	30
XXIII 0	, 00	, 00	, 00	, 00	, 00	, 00	, 00	, 01	, 04	, 11	XI 0
30	, 00	+, 00	+, 01	+, 02	+, 03	+, 04	+, 06	+, 06	+, 06	+, 05	30

A Table of the annual variation of the Precession in Declination

arg at top the Declination, at the side the A. R. of the Star.

Declin. *North.*	0°	30°	50°	60°	65°	70°	75°	78°	80°	82°	Declin. *South.*
H. M.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	H. M.
XII 0	+,0000—	+,0000—	+,0000—	+,0000—	+,0000—	+,0000—	+,0000—	+,0000—	+,0000—	+,0000—	O 0
30	, 06	, 05	, 05	, 05	, 05	, 05	, 05	+, 04—	+, 04—	+, 03—	30
XIII 0	, 11	, 10	, 10	, 09	, 08	, 08	, 07	+, 05—	+, 04—	+, 02—	I 0
30	, 17	, 15	, 14	, 12	, 10	, 09	, 06	+, 03—	00	—, 03+	30
XIV 0	, 22	, 20	, 17	, 14	, 11	, 09	, 04	—, 01+	—, 06+	—, 12+	II 0
30	, 27	, 23	, 19	, 15	, 11	, 08	, 00	—, 07+	—, 14+	—, 24+	30
XV 0	+,0032—	+,0026—	+,0020—	+,0015—	+,0011—	+,0005—	—,0005+	—,0014+	—,0023+	—,0037+	III 0
30	, 36	, 28	, 21	, 14	, 10	+, 02—	, 11	, 22	, 34	, 51	30
XVI 0	, 39	, 30	, 21	, 13	, 09	—, 01+	, 16	, 30	, 45	, 65	IV 0
30	, 41	, 32	, 21	, 13	, 07	, 04	, 20	, 36	, 54	, 78	30
XVII 0	, 43	, 33	, 22	, 12	, 04	, 07	, 24	, 41	, 60	, 86	V 0
30	, 44	, 33	, 22	, 12	, 04	, 08	, 26	, 44	, 63	, 92	30
XVIII 0	+,0045—	+,0033—	+,0022—	+,0012—	+,0003—	—,0009+	—,0028+	—,0047+	—,0066+	—,0093+	VI 0
30	, 44	, 33	, 22	, 11	, 03	, 08	, 26	, 44	, 63	, 92	30
XIX 0	, 43	, 33	, 22	, 12	, 04	, 07	, 24	, 41	, 60	, 86	VII 0
30	, 41	, 32	, 21	, 12	, 06	, 04	, 20	, 36	, 54	, 78	30
XX 0	, 39	, 30	, 21	, 13	, 09	, 01	, 16	, 30	, 45	, 65	VIII 0
30	, 36	, 28	, 21	, 14	, 10	, 02	, 11	, 22	, 34	, 51	30
XXI 0	+,0032—	+,0026—	+,0020—	+,0019—	+,0011—	+,0005—	—,0005+	—,0014+	—,0023+	—,0037+	IX 0
30	, 27	, 23	, 19	, 14	, 11	, 08	, 00	—, 07+	—, 14+	—, 24+	30
XXII 0	, 22	, 20	, 17	, 14	, 11	, 09	+, 04—	—, 01+	—, 06+	—, 12+	X 0
30	, 17	, 15	, 14	, 12	, 10	, 08	, 06	+, 03—	, 00	—, 03+	30
XXIII 0	, 11	, 10	, 10	, 09	, 08	, 08	, 07	+, 05—	+, 04—	+, 02—	XI 0
30	, 06	, 05	, 05	, 05	, 05	, 05	, 05	+, 04—	+, 04—	+, 03—	30
O 0	—,0000+	—,0000+	—,0000+	—,0000+	—,0000+	—,0000+	—.0000+	—,0000+	—,0000+	—,0000+	XII 0
30	, 06	, 06	, 06	, 06	, 06	, 07	, 07	, 08	, 08	, 09	30
I 0	, 11	, 12	, 13	, 14	, 14	, 15	, 16	, 17	, 19	, 21	XIII 0
30	, 17	, 18	, 20	, 22	, 23	, 25	, 27	, 30	, 34	, 38	30
II 0	, 22	, 25	, 28	, 31	, 33	, 36	, 40	, 45	, 50	, 57	XIV 0
30	, 27	, 31	, 35	, 40	, 43	, 47	, 54	, 60	, 68	, 79	30
III 0	—,0032+	—,0038+	—,0043+	—,0049+	—,0052+	—,0058+	—,0068+	—,0076+	—,0086+	—,0101+	XV 0
30	, 36	, 43	, 50	, 57	, 61	, 68	, 081	, 091	, 104	, 121	30
IV 0	, 39	, 48	, 56	, 64	, 70	, 79	, 093	, 106	, 121	, 140	XVI 0
30	, 41	, 52	, 61	, 70	, 77	, 88	, 103	, 119	, 134	, 156	30
V 0	, 43	, 55	, 65	, 75	, 82	, 93	, 111	, 130	, 146	, 170	XVII 0
30	, 44	, 56	, 67	, 77	, 85	, 97	, 116	, 135	, 152	, 180	30
VI 0	—,0045+	—,0057+	—,0068+	—,0078+	—,0086+	—,0098+	—,0117+	—,0136+	—,0155+	—,0183+	XVIII 0
30	, 44	, 56	, 67	, 77	, 85	, 97	, 116	, 135	, 152	, 180	30
VII 0	, 43	, 55	, 65	, 75	, 82	, 93	, 111	, 130	, 146	, 170	XIX 0
30	, 41	, 52	, 61	, 70	, 77	, 88	, 103	, 119	, 134	, 156	30
VIII 0	, 39	, 48	, 56	, 64	, 70	, 79	, 093	, 106	, 121	, 140	XX 0
30	, 36	, 43	, 50	, 57	, 61	, 68	, 081	, 091	, 104	, 121	30
IX 0	—,0032+	—,0038+	—,0043+	—,0049+	—,0052+	—,0058+	—,0068+	—,0076+	—,0086+	—,0101+	XXI 0
30	, 27	, 32	, 35	, 40	, 43	, 47	, 54	, 60	, 68	, 079	30
X 0	, 22	, 25	, 28	, 31	, 33	, 36	, 40	, 45	, 50	, 057	XXII 0
30	, 17	, 19	, 20	, 22	, 23	, 25	, 27	, 30	, 34	, 038	30
XI 0	, 11	, 12	, 13	, 14	, 14	, 15	, 16	, 17	, 19	, 021	XXIII 0
30	, 06	, 06	, 06	, 07	, 06	, 07	, 07	, 08	, 08	, 009	30

Digitized by Google

PROPER MOTION OF THE FIXED STARS.

In Vol. III. is given the Mean of the Proper Motions of all the Stars in the Catalogue, (3005 in number) both in Right Ascension and Declination: and from what there appeared to be—a tendency to exhibit a *general proper motion in the whole system of Stars*, or more simply, *a movement of the Solar System in space*, I have been induced to follow up the enquiry with the 2066 Stars which occur in the present volume, and have in a similar manner brought about 2600 Stars from the Catalogue of Volume II., to bear upon the same subject; how far these have succeeded in establishing this point will appear presently;—in the mean time, it may be proper to remark, that in an investigation of this nature, we may imagine that every star is affected with *true** Proper Motion, more or less: some Proper Motions from their magnitude, are at once recognized, whilst others from their minuteness, are lost sight of in the errors incident to observations:—we may expect however among the latter class, that— occurring indifferently + or — as the larger proper motions do,—the mean among a great many Stars would approximate to zero, and thereby leave disengaged any *apparent* Proper Motion which might exist; accordingly in the table which now follows, I have given the mean of all the Proper Motions in Right Ascension for each hour of A. R., omitting only those alluded to in the column "P.M. Stars;"—those Stars in fact whose proper motion exceeds all possible limits of error of observation; thus;— the largest error of A. R. found in the Madras Results was in the case of 169 Ceti, which differed 0,52s. in 1835, from the place determined in 1832: should the whole of this amount in the way of error, apply to one of the determinations; and should an error to the same amount but contrary direction occur in Piazzi's Catalogue, it would give rise to an error $\frac{\pm,52 \pm,52}{t}$ in the observed P. M. (t being the date of the Catalogue since 1800); in addition to this, we must take account of the fact, that the Equinoctial Point assumed by Piazzi in the construction of his Catalogue, was the same as that employed by Dr. Maskelyne; whereas we have employed a zero point 0,20s, behind this; hence the comparison of our Catalogue with Piazzi's, ought to exhibit a P. M. in Right Ascension to the amount $\frac{+,20s}{t}$; combining this with the above, we may safely assume,—that in either Catalogue—any value found in the Column "P. M. in A. R." which exceeds the limits $\frac{+1,24s}{t}$ and $\frac{-0,84s}{t}$, is more or less the effect of Proper Motion, notwithstanding the errors of observation: thus we have

* By the term "*true*" Proper Motion is meant an actual movement of the Star in space with reference to any point we may consider fixed; whereas *apparent* Proper Motion is such as would result from a movement of the Solar System.

A Table of the Proper Motions of the fixed Stars in A. R.

A. R.	P. M. Stars.	No. and sum of + & — P. M.	Mean $\frac{-,20}{t}$ (—,0063)	P. M. Stars.	No. and sum of + & — P. M.	Mean $\frac{-,20}{t}$ (—,0057)	P. M. Stars.	No. and sum of + & — P. M.	Mean $\frac{-,20}{t}$ (—,0056)	General Mean P. M.
	Vol. II. for 1832 (2881 Stars.)			Vol. III. for 1835 (3003 Stars.)			Vol. IV. for 1836 (2066 Stars)			
H. M.		s.	s.		s.	s.		s.	s.	s.
O	7	90= +1,152 7= — ,041	+,0051	7	60= +0,912 11= —0,077	+,0061	1	114= +1,358 8= —0,026	+,0053	+,0054
I	4	87= +1,0[illegible]5 12= — ,077	+,0039	8	87= +1,081 15= —0,109	+,0038	3	63= +0,897 3= —0,025	+,0076	+,0047
II	6	91= +1,260 9= — ,049	+,0058	7	61= +0,661 37= —0,318	—,0022	1	51= +0,178 5= —0,032	+,0059	+,0027
III	2	93= +1,154 10= — ,065	+,0043	4	69= +0,701 28= —0,177	—,0003	0	45= +0,579 8= —0,048	+,0044	+,0025
IV	6	126= +1,608 7= — ,037	+,0055	5	95= +0,928 26= —0,175	+,0005	3	44= +0,682 12= —0,091	+,0050	+,0036
V	5	127= +1,313 12= — ,082	+,0025	2	116= +1,009 28= —0,201	—,0002	2	63= +0,745 7= —0,045	+,0044	+,0017
VI	3	104= +0,979 8= — ,039	+,0021	9	122= +1,185 32= —0,240	—,0004	3	56= +0,784 6= —0,027	+,0066	+,0019
VII	2	90= +0,761 12= — ,065	+,0005	7	123= +1,154 23= —0,166	+,0011	3	54= +0,663 8= —0,086	+,0037	+,0015
VIII	2	77= +0,748 16= — ,104	+,0017	3	79= +0,918 31= —0,280	+,0001	2	57= +0,695 6= — ,042	+,0048	+,0019
IX	4	83= +0,677 10= — ,072	+,0013	6	73= +0,709 30= —0,189	—,0007	1	54= +0,651 9= —0,051	+,0041	+,0012
X	1	74= +0,811 15= — ,107	+,0016	7	84= +0,907 29= —0,276	—,0001	2	36= +0,557 4= —0,922	+,0067	+,0016
XI	3	66= +0,674 8= — ,089	+,0016	7	97= +1,128 41= —0,348	,0000	1	42= +0,531 6= —0,021	+,0050	+,0019
XII	4	72= + ,620 14= — ,108	—,0003	9	115= +1,233 19= —0,198	+,0023	1	45= +0,635 5= —0,030	+,0063	+,0023
XIII	6	67= + ,532 21= — ,183	—,0023	2	105= +1,086 32= —0,244	+,0004	6	68= +0,730 7= —0,080	+,0033	+,0003
XIV	2	69= + ,653 18= — ,124	—,0002	4	98= +0,969 33= —0,195	+,0002	2	47= +0,470 6= —0,032	+,0028	+,0006
XV	3	80= + ,747 9= — ,043	+,0016	4	82= +0,846 18= —0,146	+,0013	1	52= +0,520 5= —0,062	+,0024	+,0016
XVI	4	72= + ,609 16= — ,109	—,0006	0	85= +0,721 48= — 0,358	—,0030	0	55= +0,549 8= —0,039	+,0025	—,0010
XVII	4	84= +0,772 17= —0,069	+,0007	3	82= +0,754 39= —0,280	—,0018	2	104= +1,272 13= —0,093	+,0044	+,0010
XVIII	4	92= +0,883 12= —0,057	+,0017	5	81= +0,718 22= —0,185	—,0005	4	82= +0,926 12= —0,091	+,0033	+,0015
XIX	6	114= +1,192 12= — ,062	+,0027	4	97= +1,005 24= —0,186	+,0011	1	142= +1,654 16= —0,109	+,0042	+,0028
XX	7	100= +1,134 17= — ,104	+,0025	10	97= +1,150 16= —0,117	+,0034	4	193= +2,292 18= —0,122	+,0047	+,0038
XXI	3	98= +1,205 13= — ,057	+,0041	5	96= +1,227 12= —0,104	+,0047	22	144= +1,873 19= —0,117	+,0052	+,0048
XXII	4	104= +1,274 10= — ,039	+,0045	13	89= +1,047 11= —0,049	+,0041	4	72= +0,910 6= —0,025	+,0057	+,0047
XXIII	2	97= +1,162 8= — ,039	+,0044	9	94= +1,259 13= —0,101	+,0051	4	57= +0,799 7= —0,029	+,0064	+,0053

Digitized by Google

On inspecting the several columns in the above table, we perceive (as indeed might have been expected), that the errors incident to observation, combined with the chance excess of + or — *true* Proper Motion—exert a very powerful sway over our results; examining the column "*Mean*," there is however a determination to *plus maximum* in the neighbourhood of O hours, which is certainly not the effect of chance:—on referring to the formulæ for the Precession in Right Ascension (c).

$$c = + \overset{''}{46},021 + \overset{''}{20},043 \ \sin.\ a \ \tan.\ \delta$$

it is at once evident, that although a slight modification of the assumed General Precession of the Equinoxes may be necessary; still the cause of variation throughout this column remains unexplained: with regard to the effect of error in the Precession upon this table; it is necessary to know approximately, the situation of the stars observed: on referring to the Catalogues, it will be found that they are pretty evenly distributed, and that about one half of the whole number in each hour, is situated within $\pm$ 20° of Declination; thus,

if between	— 45°	and	— 40°	of Declination there are	26 Stars
then ——	— 40	—	— 30	—— —— ——	42 ——
——	— 30	—	— 20	—— —— ——	31 ——
——	— 20	—	— 10	—— —— ——	40 ——
——	— 10	—	0	—— —— ——	72 ——
——	— 0	—	+ 10	—— —— ——	100 ——
——	+ 10	—	+ 20	—— —— ——	100 ——
——	+ 20	—	+ 30	—— —— ——	88 ——
——	+ 30	—	+ 40	—— —— ——	47 ——
——	+ 40	—	+ 50	—— —— ——	55 ——
——	+ 50	—	+ 60	—— —— ——	42 ——
——	+ 60	—	+ 70	—— —— ——	36 ——
——	+ 70	—	+ 80	—— —— ——	20 ——
——	+ 80	—	+ 90	—— —— ——	4 ——
					703 ——

If we now compute for each hour of A. R.—the change of annual precession due to each of these 703 Stars from a change of 1″ in the value of the General Precession in Longitude—and then take the means,—they will exhibit to a sufficient degree of accuracy, the *nature* of the corrections which apply to the column "Proper Motion in A. R." in case the Precession has been wrongly assumed; thus

Digitized by Google

Error of the Column "Mean P. M. in A. R." corresponding to an error of 1″ in the General Precession in Longitude.

RIGHT ASCENSION.		*error in time.*
h. m.		*s.*
O 30	=	,063
I 30	=	,065
II 30	=	,068
III 30	=	,070
IV 30	=	,071
V 30	=	,072
VI 30	=	,072
VII 30	=	,071
VIII 30	=	,070
IX 30	=	,068
X 30	=	,065
XI 30	=	,063
XII 30	=	,060
XIII 30	=	,058
XIV 30	=	,055
XV 30	=	,053
XVI 30	=	,052
XVII 30	=	,051
XVIII 30	=	,051
XIX 30	=	,052
XX 30	=	,053
XXI 30	=	,055
XXII 30	=	,058
XXIII 30	=	,060

Since then the disposition of the above numbers is not such as to explain the various values found in the column "Proper Motion in A. R.;" we will now consider what effect a motion of the Solar System in space would have upon the question: in the first place we notice with regard to its general effect—that there would be two opposite neutral points, situated in the axis of motion, and that at right angles to this—there would be a plane of maximum motion:—with regard to its effect upon our results for the A. R.—it is necessary to consider again the position of the Stars constituting the results: on consulting the table at page CXVII, it appears that the whole of the Stars may roughly be supposed—to be congregated about a circle of 15° of North Declination, or surrounding the pole at a distance of 75° from it: with this view of the subject, we perceive that our results should exhibit two zero points, and one of +, and another of —, maximum; and moreover, that the mean of the 24 results

Digitized by Google

should = 0; on taking the mean however, it comes out + s,0025: exhibiting with reference to the above table,—*that the General Precession in Longitude should be increased* 0″ ,0416;* If we now apply to our results the corrections due to this, and convert them into space, we have as follows—

Observed General Proper Motion of the Fixed Stars in A. R.

A. R.		P. M. Space		P. M. in arc of a great circle.
h.	*m.*	″		″
O	30	+ 0420	*or*	+ ,0368
I	30	+ ,0315		+ ,0266
II	30	— ,0015		— ,0000
III	30	— ,0060		— ,0026
IV	30	+ ,0090		+ ,0101
V	30	— ,0195		— ,0139
VI	30	— ,0165		— ,0114
VII	30	— ,0225		— ,0173
VIII	30	— ,0135		— ,0101
IX	30	— ,0240		— ,0190
X	30	— ,0165		— ,0127
XI	30	— ,0105		— ,0076
XII	30	— ,0030		— ,0024
XIII	30	— ,0315		— ,0254
XIV	30	— ,0255		— ,0203
XV	30	— ,0090		— ,0077
XVI	30	— ,0495		— ,0393
XVII	30	— ,0165		— ,0140
XVIII	30	— ,0090		— ,0076
XIX	30	+ ,0090		+ ,0089
XX	30	+ ,0240		+ ,0203
XXI	30	+ ,0345		+ ,0444
XXII	30	+ ,0345		+ ,0304
XXIII	30	+ ,0420		+ ,0368

The reduction into *arc*, has been effected with reference to the table at page CXVII on the supposition that the Declination of each group of Stars is constant, or the P. M. in *arc* = P. M. in space $\times \left(\frac{26.\ cos\ 42^{\circ}\ 30' + 42.\ cos.\ 35^{\circ} + 31.\ cos.\ 25^{\circ} + \&c.}{703}\right)$

We will now leave the above table for the present, and proceed to take notice of the Annual Proper Motion in Declination. Taking the Means in each hour of A. R. we obtain as follows.

---

* Agreeable to the formulæ employed in deducing these three catalogues;—the Precession in A. R. for 1830 = 46″,0206 + 20,0426 *sin. a tan.* δ, whereas it would appear from this result, that the proper formulæ is = 46″,0587 + 20,0577 *sin. a tan.* δ

Digitized by Google

A TABLE of the observed Proper Motion of the Fixed Stars in Declination.

	Vol. II. for 1832;—2881 Stars.			Vol. III. for 1834;—3003 Stars.			Vol. IV. for 1836;—2066 Stars.		
A. R.	P. M. Stars.	No. and sum of + & — P. M.	Mean.	P. M. Stars.	No. and sum of + & — P. M.	Mean.	P. M. Stars.	No. and sum of + & — P. M.	Mean.
H. M.		"	"		"	"		"	"
O	6	32= + 2,10 67= — 6,30	—, 0424	5	29= + 0,99 43= — 3,73	— ,0381	1	43= + 2,03 80= — 6,19	— ,0338
I	7	41= + 2,11 52= — 5,41	— ,0355	2	48= + 2,28 60= — 5,37	— ,0286	2	30= + 1,69 38= — 2,96	— ,0187
II	9	20= + 0,95 74= — 7,42	— ,0688	7	37= + 2,51 61= — 5,97	— ,0353	2	29= + 1,76 30= — 2,64	— ,0149
III	3	27= + 1,47 72= — 6,39	— ,0497	7	41= + 1,90 62= — 5,03	— ,0304	3	20= + 1,19 30= — 2,55	— ,0272
IV	9	32= + 1,76 97= —10,23	— ,0657	5	51= + 3,19 70= — 6,36	— ,0262	2	28= + 1,70 27= — 2,18	— ,0087
V	9	38= + 1,95 88= — 9,04	— ,0563	3	53= + 3,96 74= — 6,99	— ,0239	4	38= + 1,96 30= — 2,00	— ,0007
VI	8	29= + 2,37 76= — 6,14	— ,0359	10	72= + 4,56 79= — 7,61	— ,0202	1	28= + 2,31 38= — 3,22	— ,0138
VII	2	32= + 2,25 69= — 6,41	— ,0412	5	59= + 2,96 89= — 7,49	— ,0306	1	29= + 2,08 33= — 3,25	— ,0189
VIII	3	22= + 1,31 67= — 5,86	— ,0511	2	30= + 1,70 76= — 6,31	— ,0435	2	25= + 1,12 40= — 2,97	— ,0284
IX	6	16= + 1,32 58= — 5,29	— ,0536	3	31= + 1,36 75= — 5,55	— ,0395	1	23= + 1,18 37= — 2,20	— ,0170
X	5	20= + 1,13 62= — 6,60	— ,0667	2	39= + 1,55 79= — 8,19	— ,0563	2	11= + 0,65 28= — 2,40	— ,0449
XI	5	23= + 0,74 55= — 5,25	— ,0568	6	28= + 1,45 92= — 8,64	— ,0599	1	6= + 0,31 36= — 3,76	— ,0821
XII	5	22= + 0,96 60= — 5,59	— ,0565	3	51= + 3,47 87= — 8,14	— ,0338	2	10= + 0,39 40= — 4,46	— ,0814
XIII	7	18= + 0,95 68= — 6,81	— ,0681	2	46= + 2,57 90= — 7,45	— ,0359	6	24= + 1,31 52= — 4,27	— ,0389
XIV	13	21= + 1,48 57= — 5,96	— ,0574	5	41= + 1,91 90= — 8,13	— ,0475	2	10= + 0,42 43= — 3,82	— ,0642
XV	18	23= + 1,28 70= — 6,48	— ,0559	3	31= + 2,36 72= — 6,27	— ,0380	1	16= + 0,47 41= — 4,19	— ,0640
XVI	9	24= + 1,81 73= — 8,07	— ,0645	6	38= + 1,94 95= —10,41	— ,0637	1	18= + 0,84 44= — 3,61	— ,0446
XVII	15	21= + 1,32 60= — 4,84	— ,0435	10	32= + 1,25 76= — 8,27	— ,0650	6	27= + 0,92 90= — 8,13	— ,0616
XVIII	19	22= + 1,30 64= — 6,40	— ,0593	4	31= + 1,73 76= — 8,42	— ,0625	1	15= + 0,86 80= — 7,61	— ,0710
XIX	19	29= + 1,30 82= — 7,88	— ,0593	4	33= + 1,90 80= — 8,20	— ,0558	8	32= + 1,28 119= — 11,28	— ,0662
XX	6	40= + 2,55 78= — 8,66	— ,0535	5	43= + 3,03 85= — 9,12	— ,0476	4	52= + 2,85 158= —14,87	— ,0572
XXI	12	26= + 1,73 75= — 7,65	— ,0586	2	33= + 1,50 78= — 7,76	— ,0564	3	53= + 2,76 130= —11,97	— ,0503
XXII	9	27= + 1,65 84= — 8,36	— ,0605	4	45= + 2,43 67= — 5,85	— ,0354	4	29= + 1,50 51= — 4,21	— ,0339
XXIII	9	27= + 1,77 72= — 6,26	— ,0454	3	43= + 2,59 70= — 5,58	— ,0265	4	24= + 1,41 40= — 3,64	— ,0348

Digitized by Google

Here we find all the results affected with the sign *minus*, which leads us to enquire what circumstances may affect the Palermo or Madras Observations to account for such a disposition; in the first place, the latitudes l, l' of Palermo or Madras, may be wrong; and in the next place the error of the tables of refraction will enter; added to which any error in the General Precession in Longitude, will affect each result by a quantity x. *cos.* A.R.; or each of the above results may possibly be erroneous to the amount $\frac{d\,l + d\,l + d\,r + d\,r'}{t}$ + x, *cos.* A. R.; which put = S + x. *cos.* A. R.

With regard to the first of these terms, it will be observed—that its effect is constant throughout, for each catalogue; but would be larger upon that for 1832 than that for 1835 or 1836—in proportion to the value of t (the date since 1800); whereas the term depending upon the A. R., (which is common to each catalogue), being variable throughout the column, to the same extent +, as it is—, will be lost sight of on taking the mean of the 24 hours; thus—taking the mean for the 24 hours of the three catalogues we get

$$\text{General Annual P. M. in Declination.} = -\,,0544 + \frac{S}{32,5}$$
$$= -\,,0417 + \frac{S}{35}$$
$$= -\,,0406 + \frac{S}{37}$$

$$\therefore S = +\,3'',61$$

With regard to the value of $d\,l'$, we have no evidence to shew the extent of accuracy obtained, we only could have expected and wished, that the results of so great and good a catalogue as Piazzi's had in this respect been free from any serious error: the value of $d\,l'$ has already been found at page 73 to be—1″; which is probably within a tenth or two of a second of the truth: to form an estimate of the value $d\,r$; it may be safely assumed, that the *uncertainty* of refraction, for altitudes above 10°—varies as the amount of refraction itself, or nearly as the tangent of the zenith distance of the Star; if then with reference to the table at page cxvii, we compute the value

$$\frac{26\ tan.\ 41^{\circ}\ 30' + 42\ tan.\ 35^{\circ} + 31\ tan.\ 25^{\circ} + \&c.}{703}$$

we find, that the uncertainty of refraction for the Palermo observations is such as would apply to a Star situated 43°,15 from the zenith; at which place, half a second is certainly the extreme limit of error, or $d\,r = \pm\,'',5$: with regard to the Madras results, the case is much more favorable, for the Stars are so evenly disposed on either side of the zenith, that it matters not what table

Digitized by Google

of refractions had been employed; hence $d\,r = 0$ and we have found altogether

$$S = 3'',61 = d\,l - 1'',0 \pm 0'',5 \pm 0 \because d\,l \text{ is between } 4'',1 \text{ and } 5'',1$$

or it would appear that the Latitude of Palermo is above 4″ less than that assigned to it by Piazzi.

A variation of above 4″ however, and that built only upon very slender grounds,—cannot for the present be admitted; we will therefore subtract the mean result of each catalogue from its several constituents' values, and then combine the results according to their weight; when, putting s, for the true correction which remains to be applied to these to render them just; and x for any error which may result from a wrong assumption of the General Precession, we obtain as follows—

A. R.		General P. M. in Declination.	Cord. General P. M. in Declination.
h.	m.	No. 1.	No. 2.
O	30	s + ,0078 + ,991 x	s — ,0071
I	30	+ ,0172 + ,923	+ ,0038
II	30	+ ,0032 + ,793	— ,0083
III	30	+ ,0099 + ,608	+ ,0009
IV	30	+ ,0072 + ,382	+ ,0015
V	30	+ ,0146 + ,130	+ ,0127
VI	30	+ ,0216 — ,130	+ ,0235
VII	30	+ ,0139 — ,382	+ ,0196
VIII	30	+ ,0037 — ,608	+ ,0127
IX	30	+ ,0073 — ,793	+ ,0188
X	30	— ,0121 — ,923	+ ,0013
XI	30	— ,0171 — ,991	— ,0023
XII	30	— ,0037 — ,991	+ ,0111
XIII	30	— ,0009 — ,923	+ ,0126
XIV	30	— ,0111 — ,793	+ ,0004
XV	30	— ,0043 — ,608	+ ,0047
XVI	30	— ,0142 — .382	— ,0085
XVII	30	— ,0134 — ,130	— ,0115
XVIII	30	— ,0190 + .130	— ,0211
XIX	30	— ,0160 + ,382	— ,0217
XX	30	— ,0090 + ,608	— ,0180
XXI	30	— ,0094 + ,793	— ,0209
XXII	30	+ ,0019 + ,923	— ,0115
XXIII	30	+ ,0108 + ,991	— ,0041

In which s,—if the above error of 4″ in the Palermo Latitude be admitted, = + ,″0595.

Examining column No. 1, we find a pretty regular determination to + and —, which cannot possibly arise from accident; we notice—that any small correction for error of Precession, such as found at page cxix,—since it interferes in no respect with the *general tendency* of the numbers, it may be applied or not, at pleasure; to be consistent however, it will be proper to apply the

Digitized by Google

correction due to an alteration of, "041 in the General Precession as found at page cxix; viz, ",0150 cos. A. R.: thus *No.* 2. If we now divide the line A, B, Fig. 1 into 24 equal parts, to represent hours of A. R., and making use of any convenient scale—set off opposite to 0*h*. 30*m*. 1*h*. 30*m*. &c. the perpendiculars *a* 1, *a* 2, &c. corresponding to the values given in the table at page cxix, and perform the same for the above table; we get two series of lines 1, 2, 3, and 1, 2, 3, exhibiting in the first instance, the observed annual Proper Motion in A. R., of Stars supposed to be situated at 0*h*. 30*m*. 1*h*. 30*m*. &c. of Right Ascension, and at a distance of 75° from the North Pole; and in the second case, exhibiting the *nature* of the annual P. M. of the same Stars in declination, but not its *extent*. If we now with freedom draw a curve line through each of these series of points, conforming as nearly with them as is consistent with the character of a curve; we shall by measuring the ordinates, obtain corrected values of the Proper Motion, thus

Corrected Proper Motion.

h.	*m.*	in A. R. in arc "	in Declination. "
O	30	+ ,0312	s— ,0100
I	30	+ ,0250	— ,0070
II	30	+ ,0180	— ,0020
III	30	+ ,0135	+ ,0040
IV	30	+ ,0060	+ ,0100
V	30	— ,0035	+ ,0145
VI	30	— ,0110	+ ,0180
VII	30	— ,0160	+ ,0190
VIII	30	— ,0175	+ ,0180
IX	30	— ,0190	+ ,0170
X	30	— ,0200	+ ,0145
XI	30	— ,0210	+ ,0115
XII	30	— ,0210	+ ,0080
XIII	30	— ,0200	+ ,0040
XIV	30	— ,0190	— ,0015
XV	30	— ,0180	— ,0065
XVI	30	— ,0158	— ,0110
XVII	30	— ,0115	— ,0145
XVIII	30	— ,0045	— ,0175
XIX	30	+ ,0067	— ,0195
XX	30	+ ,0163	— ,0195
XXI	30	+ ,0240	— ,0175
XXII	30	+ ,0300	— ,0160
XXIII	30	+ ,0320	— ,0140

These numbers it will readily be admitted, have been arrived at in a legitimate way, and they are to all intents and purposes Proper Motions: since then it will not for a moment be contended that they represent "true" or actual Proper Motions of the Stars themselves, we will see how far the supposition of a motion of the Solar System in space will account for the several values;

Digitized by Google

for this purpose, on the centre P (fig. 3) with the chord of 75° describe a circle which divide into 24 equal parts, corresponding to the several points at which we have determined the Proper Motions: with reference to the P. M. in A. R. we find, that it arrives at O at about V and XIX hours; whereas to represent the effect of motion of the Solar System these points should be separated by 12 hours: let us then assume VI and XVIII to represent the zero points in A. R., and draw the line VI—XVIII: if we assume the point to which the motion of the Solar System is directed, to be situated any where in the direction P. XVIII, it will at once represent the nature of the above table for the A. R.: for the effect of advancing to any point N, being to increase the arc N. S. to N S′ (in which S. S.′ = M. *sin.* N S.) its effect at any point between 18*h*. and 6*h*, is to increase the Right Ascension, whereas at the corresponding points between 6*h*. and 18*h*. it causes a diminution to the like amount: examining these results, it appears on trial that no single value for M, will satisfy both of these tables; if we allow that Piazzi's Latitude has been correctly observed (and since writing the above, I find in the Nautical Almanac, from late observations an exact confirmation of the value assigned by Piazzi); then, the distance of the point N from P, comes out between 23° and 24°, a point which is sufficiently enough distinguished, as being the *Pole of the Ecliptic*: with regard to the Declination Proper Motions,—the very improbable result arrived at, at page cxxi from the mean of the whole 24 hours, teaches us—that little dependance can be placed upon individual results; and on examining different tables of refraction, it will be found, that the various corrections for temperature, which are given in one or other of these, offers a sufficient explanation for the want of agreement of the P. M. from the Declination observations with that found from the Right Ascensions. Since writing the above, on consulting the three several results of the table at page cxvi—instead of the *mean* which has hitherto been employed; I find that the determination to + and — maximum, is much more strongly marked in the first catalogue than it is in the second; and that the second is more strongly marked than the third:—Now this result is precisely the one which should obtain from a motion of the Solar System in space; for, on consulting the first catalogue (Vol. II.) it will be found to contain several stars of the first and second magnitudes, and a great many of the third and fourth &c. or it may be assumed that—

For the Catalogue in Vol. II. the average mag. = 5,4
—— ——III. —— —— = 6,4
—— ——IV. —— —— = 7,8

Although in individual instances,—the degree of brightness exhibited by the fixed stars cannot be assumed as a measure of their relative distances; still in large catalogues such as the above, it is natural to suppose that—taken *en masse,* those are nearest to us which are the brightest; hence the stars in Vol. II. from being brighter—nearer to us—should render a movement of the Solar System in space more apparent than those given in Vol. III or IV: with this view of the subject, the anomalies met with at pages cxxi and cxxii, (where the P. M. in Declination from the three catalogues gave S = 3″ ,61 and Piazzi's Latitude above 4″ in error) are fully explained and accounted for: and for the present it may be assumed—*that the Solar System is in motion in space, and that its motion is directed towards the North Pole of the Ecliptic;* and, exhibiting in the fixed Stars with reference to their *average distance* (if such an expression can be tolerated),—an annual change of place in Latitude, to the amount + ″,059 *cos. Lat. of the Star.*

SUPPLIMENTARY OBSERVATIONS AND MEMORANDA.

In the ordinary course of Observing and computing, it often happened—that an appearance different from ordinary, an error, an omission, or a discordance of some kind or other—has offered, which it was desirable should be placed on record, or, that the matter if doubtful, should on a subsequent occasion be re-examined &c.—in either of these cases the observing or computing books not offering sufficient accommodation for remarks, and in some cases being in-appropriate,—I have been in the habit of entering into a memorandum book, these circumstances &c. as they have occurred, and in the course of printing, when opportunity has offered--I have availed myself of its contents;—several of these memoranda which still remain, are for my own private, information and guidance, whilst others again—appear to belong to this work: such as they are, I have thought it best to give them here in the rough manner and order in which they have been made, thus—

MEMORANDA &c.

I. Re-examined the N. P. D. of 40 *Lyncis r* which exhibits a strange disagreement when compared with the Greenwhich place—thus

				Reduced to Jan. 1, 1835. ° ′ ″
Greenwhich place from observations in			1825	54 54 52,76
Madras	——	——	1831	68,20
	——	——	1832	57,45
	——	——	1833	57,38
	——	Jan.	1835	

Digitized by Google

		° ′ ″		
1836	March 26	54 55 12,01	1836	56,25
	April 13	10,61		
	—— 16	10,59		
1837	Feb. 4	11,92	1837	57,53
	18	12,08		
	March 6	11,73		
	7	12,76		
	18	12,69		
	19	12,32		
	20	12,84		
	April 13	12,47		

II. No. 171 in II hours is preceded by another Star at 16 seconds, whereas Piazzi says at 12 seconds.

III. No. 152 in IV hours:—Piazzi's Declination probably five minutes in error; examine this.

IV. No. 64 in IX hours is not observed:—I looked for it on the 29th and 30th April 1837 (it being very clear), saw No. 65 but 64 had disappeared.

V. No. 15 in XI hours:—It is very extraordinary that Piazzi has not noticed the star following this at 4—5 seconds, and 23″ to the North.

VI. No. 154 in XII hours:—in Piazzi's Catalogue the A. R. is given 187° 36′ 50″,4; instead of 187° 39′ 50″,4 *I imagine.*

VII. No. 39 in XIII hours:—Piazzi's Annual Precession is erroneous, hence the Right Ascension is probably so too.

VIII. No. 25 in XIII hours:—Piazzi gives diff. Declination between this and the accompanying Star = 16″,9
whereas from our obs. 1837 May 23 = 25″,0
—— 24 = 27″,2

IX. No. 12 in XXI hours:—or No. 2511 of R. A. S. C. the proper Motion is determined by B. F. with P = — 1″,09
—— —— P —— P = — 0″,60
—— —— P —— T = + 0″,09

X. No. 168 in XVIII hours:—On the 25th April 1837, I observed two stars here, 5′ *North* and 0,60*s. following.*

XI. No. 53 in XIX hours:—Piazzi says, "6″,2 temporis alia 8,9 æ magnitud. praecedit, 3′ ad Boream": it now in (1837) differs 7,8 seconds.

XII. No. 106 in XIX hours.—May 3d 1837 I observed two stars here; Piazzi has not noticed this—

Digitized by Google

XIII. No. 252 in XIX hours:—Two observations with the Transit give the A. R. 1*m.* or 15′ different from Piazzi; in the Catalogue I have through inadvertence supposed our results to be erroneous; but this must be re-examined.

XIV. No. 103 in XX hours:—Piazzi mentions a Star accompanying this, its place now is { A. R. 20*h.* 13*m.* 19,98*s.* / Dec. —6° 11′ 58″,25 } January 1, 1836.

XV. No. 221 in XX hours:—Piazzi says "8″ temporis 6′ ad austrum alia 8 æ magn. sequitur: I cannot find this Star, but have observed one 20 seconds *preceding* and 6′ to the South—examine this again.

XVI. No. 286 in XX hours:—This Star is not to be found in the place assigned from Piazzi's Catalogue; the nearest Star is 10—11 minutes of space distant.

XVII. No. 42 in XX hours:—I re-examined the place of this Star on the 14th September in 1837, when the A. R. January 1, 1837 came out 20*h.* 4*m.* 37,94*s.* confirming the large P. M.—,330*s.* found in Vol. III.

FINIS.

Digitized by Google

Errata in the present Volume.

Page 4 line 15 for observations *read* observation.
No. 183 Mag. 8 —— 6
— — Declin. No. Obs. 2 = 32″,36 *read* 4 = 20″,92
— — —— P. M. for +,15 *read* —,12
1225 Log. d — — +4, 5105 —— —4, 5105

Additional Errata in Vol. II.

In the Catalogue No.		for		read		
21	N. P. D.	for	46″,27	*read*	43″,27	
109	——	—	100° 51′	—	100° 52′	
147	Ann. Pre. A. R.	—	4,833s.	—	3,833s.	
155	——	—	1h. 17m.	—	1h. 18m.	
157	——	—	1h. 18m.	—	1h. 19m.	
274	——	—	2h. 2m.	—	2h. 28m.	
701	——	—	5h. 34m.	—	5h. 33m.	
805	——	—	45,70s.	—	——	it was not obsd.
989	N. P. D.	—	66° 55′	—	66° 53′	
1365	——	—	102° 17′	—	102° 16′	
1540	——	—	90° 27′	—	——	a wrong star.
1690	——	—	110° 36′	—	110° 38′	
1968	A. R.	—	54,62s.	—	53,62s.	
2051	——	—	17h. 46m.	—	17h. 47m.	
2110	——	—	18h. 12m.	—	18h. 13m.	
2174	——	—	26,32s.	—	36,32s.	
2455	N. P. D.	—	56° 32′	—	56° 39′	
2456	A. R.	—	52,95s.	—	29,19s.	

Additional Errata in Vol. III.

In the Catalogue at pages xx, xxvi, xxxii, xxxiv, xxxviii and xliv, correct the date to 1835.

No.		for		read
69	A. R.	for	16,54s.	*read* 17,54s.
98	——	—	9,09s.	— 11,07s.
403	——	—	4,41s.	— 1,10s.
436	——	—	55° 69	— 56° 55
718	——	—	58,87s.	— 53,60s. & P. M. = +,009s.
746	——	—	44,23s.	— 40,75s. & P. M. = ,000s.
827	——	—	41,28s.	— 41,85s. & P. M. = ,078s.
838	Piaz. No.	—	329	— 332
*838	Declin.	—	1=34,85	— 19″,44 & correct P. M. = —0″,48
841	P. M. Declin.	—	+″,08	— +0″,37
980	—— A. R.	—	—,108s.	— +,001
993	——	—	783s.	— 8,54s.
1109	P. M.——	—	—,057s.	— ,000s.
1162	P. M.——	—	—,116s.	— ,023s.
1655	A. R.	—	49,17s.	— 49,69s.
1660	——	—	19,09s.	— 19,75s.
2096	Log. C	for	—0,6218	*read* +0,6218.
2193	Declin.	—	13,15s.	— 13,14s.
2221	A. R.	—	51,75s.	— 52,14s.
2452	Declin.	—	14°30′	— 16°30′
2453	——	—	Cancel the result.	
2528	P.M. in A.R.	—	—,140	— —,330

* This however must be re-examined.

Digitized by Google